DOCUMENT RESUME

ED 392 476 JC 960 127

TITLE	A Report on Nursing Programs in Illinois Community Colleges.
INSTITUTION	Illinois Community Coll. Board, Springfield.
PUB DATE	Mar 96
NOTE	65p.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Allied Health Occupations Education; Articulation (Education); Community Colleges; Cost Effectiveness; Educational Quality; Employment Opportunities; *Labor Market; *Nursing Education; Program Effectiveness; Program Evaluation; Two Year Colleges; Vocational Education
IDENTIFIERS	*Illinois Community College System

ABSTRACT

As part of a fiscal year 1995 annual review of programs, the Illinois community colleges reviewed four nursing programs to assess how effectively they met the economic, social, and technological needs of the community. The nursing programs reviewed included registered nursing, practical nursing, nurse aide, and home health aide. Although the costs for associate degree or registered nursing (AND) programs were found to be high, licensed practical nursing (LPN) and certified nursing aid (CNA) programs were found to be cost-effective. All of the programs were rated highly for quality, citing high levels of student satisfaction, high passage rates on licensure exams, such improvements in facilities as technology upgrades, and program accreditation. The following program improvements were recommended: (1) local job markets for the AND, LPN, and CNA graduates must be monitored; (2) methods for improving student retention must be implemented; (3) a statewide nursing articulation model must be adopted; and (4) accessibility of labor market and career guidance information to students must be improved. Contains 22 references. Appendixes include a description of the nursing programs' differentiating characteristics, data tables of review outcomes, tables of articulated courses for nursing programs from high schools through universities, and a list of National League of Nursing accreditation status of state nursing programs by college. (TGI)

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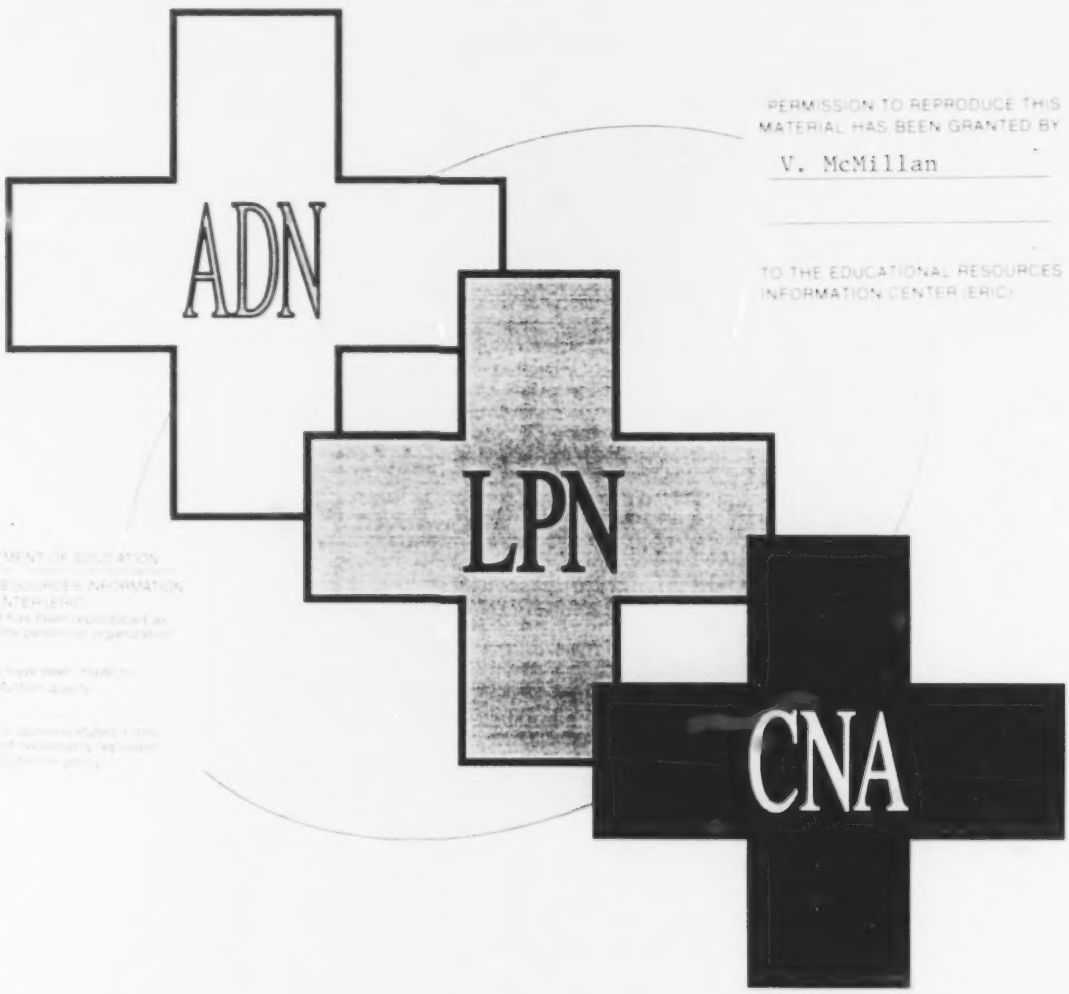
A REPORT ON NURSING PROGRAMS IN ILLINOIS COMMUNITY COLLEGES

March 1996



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Printed by Authority of the State of Illinois

Illinois Community College Board

A REPORT ON NURSING PROGRAMS IN ILLINOIS COMMUNITY COLLEGES

March 1996

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REPORT ON NURSING PROGRAMS IN ILLINOIS COMMUNITY COLLEGES

INTRODUCTION

Students choosing a career in nursing have made this decision with confidence that job opportunities will be ready and waiting when they graduate. U.S. Department of Labor statistics generally support this assumption. The health services industry, as a whole, has been one of the leading growth sectors of the past decade and is projected to continue to grow at twice the average rate in the coming decades. In fact, through the year 2005, health services industries will account for 17 percent of total job growth and provide 4.2 million new jobs (Occupational Outlook Quarterly, Fall 1993, p. 26.) Registered nurses, licensed practical nurses, nurse aides, orderlies, attendants, and home health aides are among the occupations most significantly affected by this job growth due to their concentration in the industry. Employment projections for Illinois indicate that these occupations will be among those providing major employment growth in the state. However, economic, social, and technological changes are impacting the nature of these jobs, particularly in terms of skills and work settings. Future hiring decisions will favor graduates of programs which are designed to meet emerging trends. Illinois community college program review reports indicate that many community colleges are modifying curricula and implementing various initiatives to respond appropriately to these changes.

This report highlights program reviews conducted by community colleges on nursing programs in four categories. A brief overview of health industry trends is provided as a foundation to a discussion of implications and recommendations for these programs to stay responsive and effective in an ever-changing health care environment. The nursing programs included in the report are:

Nursing (R.N. Training)	CIP 511601
Practical Nursing (L.P.N. Training)	CIP 511613
Nurse Aide/Assistant	CIP 511614
Home Health Aide	CIP 511615

Differentiating characteristics of these programs are presented in Appendix A.

HEALTH INDUSTRY CHANGES

An overview of the health services industry in the nation provides a perspective from which to analyze the current status and future directions of community college nursing programs. Economic, social, and technological trends are spurring changes in health care throughout the country. Such changes carry implications for community college nursing programs and the continued effective delivery of workforce training in Illinois.

Economic factors. Job growth in health-related industries is occurring where the workers, agencies, and organizations can provide quality services and products at the most economical cost. Hospitals, in an effort to make more efficient use of personnel, are examining the feasibility of cross-training licensed/unlicensed personnel. This includes employing Patient Care Technicians--an occupation which does not require licensing. Preparation includes training in such diverse areas as nurse assisting, phlebotomy, EKG, and respiratory care. Concerns over escalating health care costs have prompted insurance companies to implement policies relating to the allowable extent of coverage for the length of time patients remain in the hospital. Hospitals, therefore, are "financially motivated" to discharge patients as soon as possible. As a result, the U.S. currently has the shortest length of hospital stay of any industrialized nation (The Nation, February 13, 1995, p. 201). Furthermore, an increasing number of medical procedures which previously required patients to be hospitalized are being performed on an out-patient basis. Such trends have resulted in a declining demand for hospital nurses and an increasing demand for nurses in other health care facilities, such as physicians' offices, HMOs, clinics, and emergency medical centers.

Social issues. Improvements in medical care have extended the average number of years people live and the likelihood of their needing long-term care even for brief periods, such as those required for surgery or stroke recovery. Forecasters predict that by the year 2030 the number of elderly in the U.S. will double from what it is today. Consequently, by the year 2005, people aged 45 and older will represent 38 percent of the total population (Occupational Outlook Quarterly, Fall 1993, p. 8). In Illinois, one-third of the population is currently 45 or more years of age according to U.S. Department of Commerce, Bureau of the Census statistics (Census and You, April 1995). Many families who are unable to care for elderly members in their homes are finding home health care services to be a more desirable, low-cost alternative to institutional care. This change in the administration of care has spawned remarkable growth in the home health industry. Nonetheless, nursing homes may be the only choice available to persons who can no longer live independently. Growing numbers of elderly are generating expanding employment opportunities in home health care and nursing homes.

Technological advancements. Medical advances are occurring through the use of genetic engineering, laser surgery, artificial organ transplants, DNA mapping, and other innovations. It is expected that medical technology will reduce premature deaths and disabling conditions by as much as 15 percent by the year 2015 (Best's Review, November 1995, p. 53). Health problems which formerly could not be diagnosed or were considered untreatable are being diagnosed and treated through the use of highly developed, complex medical equipment and intervention strategies. The increased presence of technology in health care fields means that health care employees, including nurses, must acquire new skills to provide state-of-the-art services. Soaring costs for technological advancements require health care providers to seek innovative solutions, such as becoming affiliated with other providers, redefining staff roles, and changing staffing patterns. These developments signal the advent of change to traditional nursing practice.

Other economic and social changes which may impact the health services industry loom on the horizon. Potential reductions in Medicare and Medicaid being considered in discussions to balance the federal budget may cause declining job growth in hospitals and have a negative affect on the quality and availability of health care to certain segments of the population. An economic

recession could force small companies to eliminate health care coverage for employees in order to stay competitive and financially solvent. Such action could slow the growth of health services. However, if the government assumes a greater share of or mandates health care coverage, the number of jobs could increase. Economic and social trends carry far-reaching implications and warrant close scrutiny by college personnel involved in the delivery of health occupations training programs. The program review process conducted by each community college is a primary means of assessing how effectively educational programs meet the needs of industry today and the challenges presented for the future.

COMMUNITY COLLEGE PROGRAM REVIEW PROCESS

In 1983, the Illinois Community College Board established minimum standards for a systematic and collegewide program review process. This process ensured that all instructional and student and academic support programs are reviewed once every five years. Community colleges, in their reviews, examine programs according to three basic criteria: need for the program, cost-effectiveness, and quality. College assessment of these criteria culminates in a report on the status of each program. The merger of the program review process and the Priorities, Quality, and Productivity (PQP) initiative in 1993 resulted in improved linkages between college program reviews and strategic planning.

NURSING PROGRAMS IN COMMUNITY COLLEGES

Programs assigned to Nursing (CIP 5116) contain the largest number of enrollments and completions of all community college programs (four-digit CIP). According to the ICCB publication, *Student Enrollments and Completions in the Illinois Community College System - Fiscal Year 1995* (January 1996), and information presented in the appendix of this report, students in associate and certificate nursing programs comprised 10.8 percent (N=20,161) of all occupational program enrollees and 24.6 percent (N=5,188) of all occupational degree and certificate recipients. Over two-thirds of these students were in Registered Nursing.

Associate Degree (Registered) Nursing

Program Offerings. Associate Degree in Nursing (ADN) programs which train Registered Nurses (RN) are offered by all districts except two: Danville Area Community College and McHenry County College. ADN programs provide the most extensive professional preparation in nursing offered at the community college level and are the largest single occupational program area offered by community colleges. In fiscal year 1995, a total of 13,612 students were enrolled. The length of ADN programs ranges from 61-76 semester credit hours with 66 to 70 credits constituting the norm. The majority of the programs were started between 1965 and 1975. By 1975, 32 community college districts had programs. Over the past 20 years, five new programs have been added with two of these approved within the last five years. With five of the seven

colleges in the City Colleges of Chicago district having programs, there are a total of 42 ADN programs in the Illinois community college system.

In addition to obtaining approval from the Illinois Community College Board and the Illinois Board of Higher Education to offer nursing curricula, colleges must have programs approved by an external agency, the Illinois Department of Professional Regulation (IDPR). The IDPR, by authority of the Illinois Nursing Act, is responsible for ensuring that standards are met concerning the institution's organization, curriculum, faculty, students, and facilities.

Results from Community College Program Reviews of ADN Programs. A compilation of outcome information from community college program reviews on program need, cost-effectiveness, and quality produced the following: Thirty-four colleges indicated ADN curricula at their institutions possessed a well-defined need, were of high quality, were cost-effective and, therefore, would receive only minor changes. Two colleges reported that programs would be significantly modified and major changes were planned. No colleges planned to withdraw ADN programs, but one indicated it would examine the program again in fiscal year 1996. The remaining colleges indicated that program reviews had not occurred because the programs were new, had been reviewed the previous year, or were scheduled for review in fiscal year 1996. An analysis of each required criteria is presented below.

ADN Program Need

Quality health care is a commodity which will never be obsolete, and this fact places nursing programs in an enviable position in relation to other types of occupational training provided by community colleges which may have a limited life. It is difficult to overstate the importance of preparing nursing professionals to address the needs of local communities. While the extent to which programs supply graduates to satisfy area labor market demand is important, it is not the only indicator community colleges rely on to justify and report program need. Program review reports also include findings on enrollments, completions, and job placement of graduates.

ADN Enrollments. Statewide averages and enrollment information by specific college can be found in Appendix B, Table 1-B. This table provides the percent of change from fiscal years 1991 to 1995 and the percent of change from fiscal years 1994 to 1995, as well as the number of students enrolled each year. The statewide five-year trend indicates an increase of 11.5 percent. During this same time, enrollments in *all* community college occupational programs dropped 4.9 percent. From fiscal year 1994 to fiscal year 1995 an 8.0 percent decrease in nursing program enrollment occurred, while the decrease in *total* community college occupational enrollment was 1.8 percent. Similar trends were reported nationally according to a press release from the National League of Nursing in December 1995. Enrollment data for specific colleges varies considerably, with five-year averages ranging from substantial growth at Lake Land College to an appreciable decline at John Wood Community College.

ADN Completions. Over 2,600 students earned associate degrees in Registered Nursing during fiscal year 1995 (Appendix B, Table 2-B). While this was essentially the same number of degrees

awarded in Nursing during fiscal year 1994, it represented an increase of 31.5 percent over the past five years compared to 11.19 percent for all occupational programs. Five districts accounted for over one-quarter (28.4 percent) of the completions in fiscal year 1995. These districts are City Colleges of Chicago, Triton College, Illinois Eastern Community Colleges, Parkland College and William Rainey Harper College.

Job Placement of ADN Graduates. Over half of all fiscal year 1993 ADN graduates (1,270 of 2,435 = 52.2 percent) responded to the ICCB statewide follow-up survey conducted in fiscal year 1994. The results of the survey revealed extremely high job placement rates (see Appendix B, Table 3-B). Nearly 100 (99.5) percent were employed or continuing their education. Nearly 97 percent were employed with 98 percent of those working in nursing (*1994 Follow-up Study*, Table A-5, p. 16) and approximately 82 percent were employed full-time (*ibid*, Table A-2, p. 13). Nearly 91 percent of those employed and pursuing additional education were doing so in a related field (*ibid*, Table A-3, page 14). Almost three-quarters (73.5 percent) were working in the district where they received their training. Less than 2 percent were unemployed and seeking work (*ibid*, Table A-2). The 1994 edition of *HORIZONS Occupational Information*, a publication of the Illinois Occupation Information Coordinating Committee (IOICC), listed the average starting salary of registered nurses in Illinois as $11.73 per hour. The average salary of respondents to the follow-up survey exceeded this at $14.00 per hour.

Labor Market Demand. Labor market data from the Substate Employment Projections System (Economic Information and Analysis Division, Illinois Department of Employment Security) provided by the IOICC indicate that, currently, 69 percent of Registered Nurses are employed in hospitals. Nine percent of the RNs are employed in physicians' offices, 6 percent work in nursing homes, and 2 percent are employed by home health agencies. However, this distribution is likely to change, and the settings where nurses will be employed in the future will become more diverse.

There are some mixed signals about future employment opportunities for Registered Nurses. Generally, government projections are positive as employment of Registered Nurses is expected to grow "much faster than average" into the next century. Rapid growth is expected for job opportunities in nursing homes, home health care agencies, physician's offices, clinics, HMOs, ambulatory surgical-centers, and emergency medical centers. The Illinois Department of Employment Security projects there will be about 4,800 annual job openings for Registered Nurses in Illinois, but only 4,300 graduates from diploma, associate, and baccalaureate programs. Employment of RNs in hospitals will grow only "as fast as average" due to the changing nature of health care. Some recent reports are less optimistic about employment opportunities in nursing. A somewhat controversial report from the Pew Health Professions Commission projects a surplus of 200,000 to 300,000 nurses due to anticipated widespread hospital closures by the year 2000. The Commission suggests an aggressive reduction in the number of nursing education programs primarily in associate degree and diploma degree programs. (The Third Report of the Pew Health Professions Commission, *Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century*, 1995. p. 48.) Furthermore, a recent report on an American Nurses Association national survey reveals that 68 percent of the 1,800 respondents said their employers had cut RN staffing levels within the last year (*Newsweek*, February 13, 1995, p. 86).

Community college program review reports substantiate the fact that the job market for RNs is changing. Moraine Valley Community College and Highland Community College stated that job placement of program completers can be more difficult if hospital employment is preferred. Rend Lake College indicated that acute care jobs are in short supply for new graduates and positions in home health care and specialty units often require previous experience in a hospital setting. Lewis & Clark Community College indicated that a few ADN recipients have taken part-time jobs without benefits while awaiting full-time openings in their areas of choice. Kennedy-King College found that students are shifting away from hospital employment as their only choice. Morton College stated that graduates are finding jobs, but without the "hiring bonus, high salaries, favorable working conditions, and excellent fringe benefits" often seen in previous years. Lincoln Land Community College reports that graduates are competing with baccalaureate-level graduates for jobs. An overall decrease in employment opportunities was noted by Kaskaskia College which reported that, in January of 1994, there were 238 help-wanted advertisements for Registered Nurses in area newspapers; however, there were only 48 in December of that same year. The general shortage of health care personnel in rural communities, in particular, often leads to a shortage of degreed applicants for nursing faculty positions.

Cost-Effectiveness of ADN Programs

ADN curricula are among the most resource-intensive programs community colleges offer. The average unit cost for ADN programs in fiscal year 1995 was $283.92 compared with $147.67 for all programs. Table 1 contains the distribution of statewide costs within the ADN program in 1990 and 1995. These data reveal that, in 1995, a slightly lower percentage of expenditures went for salaries and somewhat higher percentages went for equipment and allocated costs.

Table 1

PERCENTAGE DISTRIBUTION OF
UNIT COST EXPENDITURES BY EXPENDITURE TYPE
FOR ADN PROGRAMS: FY 1990-1995

Fiscal Year	Direct Salary	Direct Dept.	Equipment	Allocated Costs	Oper. & Maint.	Bldg. Rental
FY 1990	61.70%	9.70%	1.08%	20.67%	6.67%	.18%
FY 1995	60.46%	9.46%	1.24%	21.91%	6.75%	.17%

Reasons for high program costs include low student/faculty ratios, low clinical affiliate employee/student ratios, the use of all or primarily full-time faculty, and the increasing use of sophisticated forms of technology. To ascertain cost-effectiveness, colleges may conduct a

cost/revenue analysis. However, a majority of institutions compare program unit costs to the statewide average for ADN programs, the peer group average for ADN programs, and the college's overall unit cost average. Figure 1 offers a unit cost comparison for various sectors of the college, and a comparison of ADN program costs by college and college peer group is shown on Appendix B, Table 4-B.

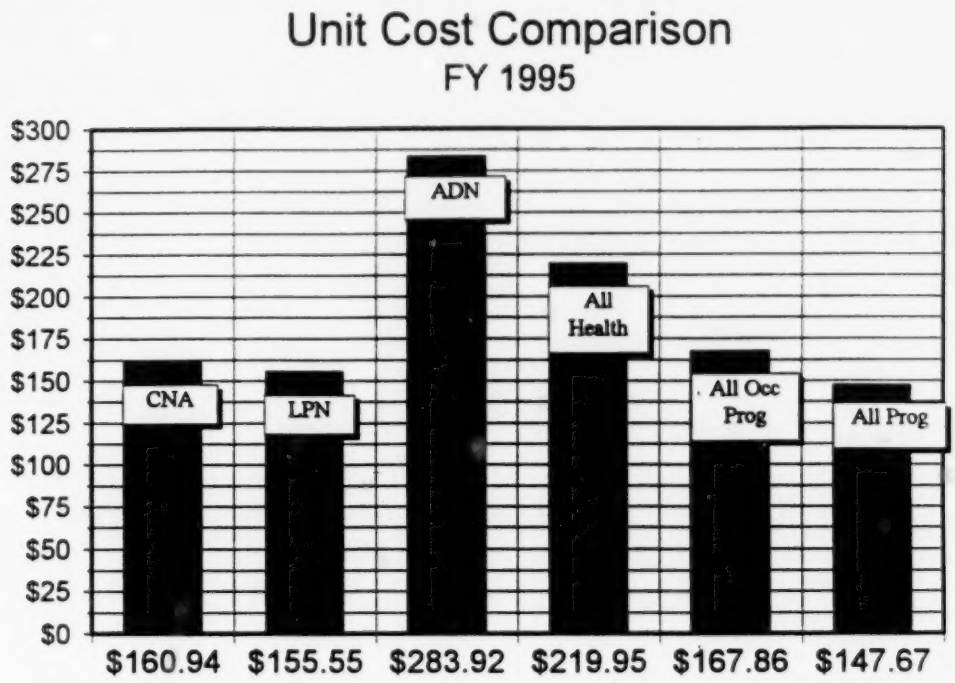

Figure 1. Unit cost comparisons for fiscal year 1995.

In some cases, colleges consider high costs justified because nursing programs provide such a valuable service to the community in training quality health care practitioners. While this is indeed a benefit, a more in-depth review could determine if there are other factors contributing to high costs which may need attention. Unit costs may be lowered by increasing enrollment (if a needs analysis supports such action and the program has not reached the student/faculty ratio maximums), securing assistance from area hospitals which may provide clinical instructors and equipment, or through other innovative methods. Course modules and nursing care plans, which formerly were part of Elgin Community College's nursing department budget, are now sold to students through the college bookstore. Illinois Central College purchased surplus equipment at an auction to help contain costs. Parkland College generated funds for program equipment from compensation received for sharing facilities with the University of Illinois. At Highland Community College, the Director of Nursing position is a joint appointment between the college and its principal clinical site.

Other colleges are seeking supplemental funding for their programs. For example, Oakton Community College acquired $317,000 over three years from the U.S. Department of Health and Human Services to support initiatives to help at-risk students. In addition, Oakton received $15,800 from a private foundation to improve computer facilities, and a majority of Carl Perkins Vocational Education Act funds were allocated to assist nursing and pre-nursing students. Highland Community College reported utilizing foundation funds for lab equipment and videos and Carl Perkins funds for new beds in the nursing lab. Likewise, grant funding enabled Illinois Central College and Spoon River College to upgrade computer hardware and software in their nursing labs. Elgin Community College was awarded a Helen Fuld Health Trust Grant to assist in the replacement and procurement of hardware and software and cited other means of cost containmentnursing which included equipment rental rather than purchasing, and obtaining donations of supplies and equipment from area hospitals and nursing homes.

In contrast, several colleges reported that nursing program unit costs are below the state average. Lower than average unit costs are commendable as long as staffing, facilities, and equipment (including the incorporation of new technology) are at a level where students are receiving appropriate instructional opportunities. This issue is particularly applicable to programs like nursing. Technological advancements in industry require curricular modifications at colleges to ensure that students are job-ready when they graduate.

Evidence of Quality in ADN Programs

ADN programs have stringent entry requirements and are generally considered among the most demanding and highest quality offerings provided by community colleges. The colleges described several indicators of program quality including: faculty, student satisfaction levels, licensure passage rates, curricular changes, clinical affiliations, improvements in nursing program facilities, improvements in student retention, articulation, and program accreditation.

Faculty. College reports frequently credited faculty as being primarily responsible for ADN program quality. Effective nursing programs command faculty dedication to students and the profession. Nursing faculty were reported as being leaders in using technology (Elgin Community College), offering instruction through distance learning opportunities (Lake Land College), implementing cooperative learning strategies (Prairie State College and College of Lake County), and in revising course objectives to focus on student outcomes. A member of the nursing faculty at Prairie State College was chosen faculty member of the year by its region's Association of Community College Trustees. Professional development opportunities to keep faculty apprised of changing health care trends were cited as the key to quality programs now and in the future. However, several colleges noted problems in keeping and attracting qualified nursing instructors because of high salaries offered to nurses holding master's degrees.

Student Satisfaction Levels. A high level of student satisfaction with nursing programs was listed as an indication of quality by several institutions. This is confirmed by findings reported in the *1994 Follow-Up Study* which documented ADN graduates' satisfaction with major program components. Based on a five-point scale, respondents awarded high satisfaction ratings overall

with an average of 4.04. Highest average ratings were given in the area of course content (4.35) and lowest ratings for labor market information (3.66). Other ratings were as follows: Lecture Lab Experiences: 4.17, Equipment/Facilities/Materials: 3.97, Job Preparation: 3.98, and Preparation for Further Education: 4.11.

Licensure Passage Rates. College reports radiated pride in the percentage of graduates passing licensure exams, many of which exceeded national rates (91.0 percent) and state rates (90.0 percent). For example, John A. Logan College's ADN program, which is not accredited, has achieved 100.0 percent pass rates for the last three years. Since April 1995, ICCB staff have been seeking release of licensure pass rate information from the Illinois Department of Professional Regulation. It appears that these data will be forthcoming. This information will be an important piece of the statewide accountability measures which were developed and endorsed by the ICCB in 1993 in its *Proposed Inventory of State-Level Accountability Measures*.

Curricular changes. Curricular modifications were mentioned as a strength or a planned improvement in program review reports. Changes typically reflect industry trends, new methods of teaching/learning, or increased applications of technology. For example, numerous institutions stated that curricula and clinical experiences include education and experiences relevant to community-based nursing. Colleges recognize that to be effective in this environment, ADN graduates must be autonomous, able to set priorities, possess delegation skills and be able to supervise assistive personnel, and have well-developed skills in decision making and critical thinking. Opportunities for such development are being infused in programs through collaborative learning experiences. In the area of technology, colleges described plans to continue to expand computer-assisted instruction, interactive video, and distance learning opportunities. In addition, Shawnee Community College will add Internet connection access for nursing students, and Kankakee Community College is planning to develop an approach to teach computerized documentation for patient charts through the use of hand held computers.

Clinical Affiliations. A necessary component of successful nursing programs is affiliation with hospitals, nursing homes, and other care providers in the community. Numerous institutions cited excellent community support and strong clinical affiliations as indicators of quality. A few colleges, particularly in rural areas, noted concerns about the availability of clinical sites. Others reported intentions to include representatives of nursing homes and home health care agencies on advisory committees. Parkland College has both a Nursing Advisory Committee and a Long-Term Nursing Advisory Committee. Prairie State College has increased opportunities for student-community interaction by providing opportunities for students to work and volunteer in the district.

Improvements in Nursing Program Facilities. Colleges strive to offer students with experiential learning that reflects conditions found in the workplace. In doing so, considerable effort is expended to meet the challenges of growing programs and increasing technology. Twelve colleges reported current or planned efforts to improve nursing lab facilities in their reports. Many of these initiatives require judicious use of funds and were detailed in the description of how colleges determine and improve the cost-effectiveness of programs.

Improvements in Student Retention. The academic rigor of ADN programs causes colleges to be concerned about retention and student success. Program review reports indicate that institutions are proactively addressing such issues through various means. Richland Community College believes that strong admission requirements ensure that students are academically well-prepared and more likely to succeed. Similarly, State Community College, John Wood Community College, and Illinois Central College plan to review and strengthen their nursing program admissions criteria. College of Lake County plans to implement a student tracking system which will provide data on nursing program admissions, progression toward degree and retention. Lake Land College plans to conduct a study to determine the extent of correlation between pre-admissions testing and program success. John Wood Community College and Joliet Junior College have added flexibility to program scheduling to help students balance work, home, and college responsibilities. Many colleges are defining course objectives in terms of measurable student outcomes, and Sauk Valley has developed a competency-based clinical performance exam. Southeastern Illinois College has a two-semester sequence of anatomy and physiology allowing students more time to master the concepts presented. College of Lake County has implemented a computerized system of "mastery learning checks," whereby students can assess their learning when it is convenient and they are best prepared. Rend Lake College developed a class which contains basic math review and progresses to more advanced medication dosage calculation skills. The course is team taught by math and nursing instructors. Other innovative means of ensuring student success includes a week-long orientation for ADN students at Oakton Community College. Activities include an overview of program, study skills, and administration of Myers Briggs personality inventory "to increase student's understanding of their own and other people's varied personalities." Moraine Valley Community College is working with the regional Illinois Nurse Executives, other community colleges, and four-year institutions to develop and implement a transition-to-practice option for new graduates.

Articulation. Planned improvements to registered nursing curricula also included implementation of the articulation model recently developed as part of the Illinois Health Articulation Project. This project was a joint venture of state education agencies, local schools, and representatives of the health industry. Work began in late 1993 and culminated with a report, recommendations, and model curricula in April 1995 (see Appendix E for a copy of the model). Presently, community colleges handle articulation in a variety of ways. Once students have completed a certain set of courses, they may challenge similar coursework in the higher level program and may be awarded advanced placement. Many colleges have found that students transitioning to advanced levels need a process or course to "bridge" their mastery of concepts from lower to more advanced learning and, therefore, have adopted this approach. Program-to-program articulation is conducted through formal articulation agreements with other institutions. Currently, 16 colleges have developed formal articulation agreements to aid student transfer, and five more institutions are in process of developing agreements with public and private senior institutions. This process is more likely to occur at institutions which are experiencing higher ADN to Bachelor of Science in Nursing (BSN) transfer rates.

Program Accreditation. One of the more controversial components of the proposed nursing articulation model is the proposed use of National League of Nursing (NLN) accreditation as an expectation of all participants and that admission for students would be dependent upon their

having graduated within five years from an NLN-accredited nursing program. The ICCB endorsed the model in the fall of 1994 with the proviso that the nursing articulation panel also address participation of non-NLN accredited programs. According to information from the NLN, two-thirds of community colleges with Associate Degree Nursing programs have currently obtained or are seeking accreditation from the NLN. Six colleges are in the process of becoming NLN-accredited. Two institutions have applied for accreditation, and the NLN reports that their applications are pending. Although discussions regarding the pros and cons of accreditation may be occurring on the remaining colleges campuses, 13 programs are currently non-NLN-accredited as reported by the Association. Information concerning nursing program accreditation is presented in Appendix F.

Associate Degree Nursing Program Summary

Program review results indicate that most colleges need only to fine-tune their ADN offerings. Two colleges are making substantial modifications to their programs, but no programs have been identified for withdrawal. Colleges reported that program need was well-supported by enrollments, job placement of ADN graduates, and labor market demand. Some colleges commented on signs of changing labor market demand in their local areas. ADN programs are the largest occupational programs offered within the community college system serving approximately 13,600 students during fiscal year 1995. Long-term graduation data show substantial growth between 1991 and 1992 with slowing growth from 1993 to the present. Reports on the job placement of graduates from the *Occupational Follow-Up Study* indicate that approximately 97 percent of fiscal year 1993 graduates responding to the survey were employed with nearly all of them working in a related field. Thirteen percent were pursuing additional education. The average annual salary among respondents was $29,120. Labor market information shows that seven out of ten community college registered nurse graduates currently work in hospitals. In the future, it is predicted that diversification of the settings where ADN graduates work will occur. The availability of job opportunities will decrease in hospitals, but increase in nursing homes, home health care agencies, physicians' offices, clinics, and emergency medical centers. The fact that ADN programs are among the most resource-intensive programs community colleges offer posed challenges for many institutions to find ways to minimize expenses. Contributing factors to high unit costs include low student/faculty ratios, heavy reliance on full-time faculty, extensive clinical experiences, and expensive high tech equipment and consumables. It was the general opinion of many colleges that the service of providing RNs to the community outweighed the high costs associated with the program. Colleges cited numerous quality factors present in ADN curricula. These included high levels of student satisfaction, high percentages of licensure pass rates, excellent relationships with clinical affiliates, accreditation, upgrades in facilities and equipment, and improvements in student retention and articulation.

ADN Program Recommendations

- **Colleges with ADN programs should monitor the job market carefully** in their local communities and adjust enrollment caps as needed. To assist the colleges with this activity, the **ICCB should provide annual information from state administrative**

databases to help colleges monitor job placement of graduates. Locally, colleges can obtain valuable insights into changing conditions through close contact with health care providers.

- **Colleges should continue to seek ways to improve student retention in ADN programs.** In addition to reviewing the information colleges presented in their program review reports which was presented above, colleges may refer to the September 1995 ICCB report, *Accountability and Productivity: Retention Initiatives in the Illinois Community College System,* which highlights a variety of methods utilized by colleges in the system to diminish attrition.

- **Colleges should continue to examine program costs.** Sources of high costs should be identified and strategies developed to reduce these without compromising program quality. Exceptionally low costs may indicate a need to increase levels of technology in order to improve student learning and offer educational opportunities which parallel those found in the workplace.

- **Colleges should adopt the statewide nursing articulation model**. ADN programs which are articulated with related programs offered by senior institutions are important in providing students with additional options after completing the ADN. The nursing articulation panel has made great strides in the past year and is continuing to develop innovative ways of assisting colleges to better articulate programs. Many colleges are proceeding accordingly, but all should be actively working to strengthen articulation.

Licensed Practical Nursing

Program Offerings. Not only are community colleges key providers of Registered Nurse training in the state, but they offer the majority of workforce training for Licensed Practical Nurses (LPN). Thirty of the 38 Practical Nurse programs approved by the Illinois Department of Professional Regulations are found in the community college system. Programs are offered in all districts except Belleville Area College, College of DuPage, Joliet Junior College, College of Lake County, Lincoln Land Community College, McHenry County College, Moraine Valley Community College, Prairie State College, Richland Community College, Rock Valley College, State Community College, and Waubonsee Community College. College of Lake County and Lincoln Land Community College have had programs in the past, but discontinued them due to lack of need. Lewis & Clark Community College discontinued its program several years ago, but reinstated it in 1995 when the need for LPNs resurfaced in the local area. Likewise, Illinois Central College discontinued its program in 1986, but reimplemented it in 1992. College of DuPage has an approved LPN program that currently is inactive (not accepting new students). Morton College and Oakton Community College both have career ladder programs integrating the LPN program into their ADN programs. In fiscal year 1995, the number of students enrolled in LPN programs totalled 3,484, which is approximately one-fourth the enrollment size of ADN programs. LPN certificates range from 34 to 49 semester credits with requirements of 42-43 credit hours being the most common.

Community College Program Reviews of LPN Programs. Colleges used the required criteria of program need, quality, and cost-effectiveness to examine LPN curricula and reported the status of their programs as follows: Twenty-six colleges indicated LPN curricula were of high need, high quality, and cost-effective and would receive only minor changes. One college planned to significantly modify its program, but no college indicated an intention to withdraw its program. Two other colleges did not conduct a program review in this area because curricula were new and one had reviewed its program in 1994.

LPN Program Need

In terms of program need, colleges examined enrollments, completions, job placement of graduates, and labor market information in preparation for their program review report submissions. Specific college findings and a statewide analysis appear below.

LPN Enrollments. Nearly 3,500 students were enrolled in LPN programs in fiscal year 1995. Appendix C, Table 1-C, shows that the number of students pursuing LPN training increased 7.0 percent between fiscal years 1991 and 1995 with enrollments reaching their pinnacle in fiscal year 1993. A decrease of 2.5 percent was noted between fiscal years 1994 and 1995. This decrease is less than the average decrease for *all* community college occupational enrollments (-4.9 percent), but considerably less than the 8.0 percent decrease for ADN program enrollments.

LPN Completions. The number of students completing LPN programs, which peaked in 1994, dropped to the lowest five-year level in fiscal year 1995 (Appendix C, Table 2-C). Colleges were evenly matched as to the number experiencing increases or decreases in the number of completions reported from 1994-1995. Even considering the decrease in the number of graduates during fiscal year 1995, over the past five years the number of LPN graduates increased by 16.2 percent from 921 to 1,070.

Job Placement of LPN Graduates. The ICCB statewide follow-up survey, which was conducted in 1994 for fiscal year 1993 graduates, offered information concerning the ability of LPN completers to obtain employment. Approximately two-fifths of LPN graduates (461 of 1,096) responded to the survey (Appendix C, Table 3-C). As was the case with ADN completers, the results of the survey showed extremely high job placement rates. Nearly 96 percent were employed or continuing their education. A substantial proportion (31.0 percent) of LPN graduates were pursuing additional education. Nearly 91 percent were employed with a vast majority (97.1 percent) working in a job related to their program of study (*1994 Follow-up Study*, Table A-5, page 16). Several colleges had a 100 percent placement rate for their graduates. The lowest rate was 81 percent; however, that college had a substantial number of LPN graduates continuing their education. Slightly more than 68 percent were working in the district in which they were trained. Approximately the same number of students were working out-of-district or out-of-state (16.2 percent and 15.7 percent, respectively) Only 3.6 percent were unemployed and seeking work at the time of the survey. The average salary of LPN respondents was $10.10 per hour. This compares to an average entry-level wage for LPNs of $7.98 and a national average wage of

$10.90 per hour for *all* LPNs according to a survey conducted by the Bureau of Labor Statistics in 1993.

Labor Market Demand. Currently, the majority of LPNs in Illinois can be found in hospital settings (46.8 percent) and nursing home facilities (22.8 percent). According to the *Occupational Outlook Handbook*, nursing homes will offer the most new jobs for LPNs due to recent state and federal regulations requiring more employment of persons at this skill level. "Very rapid growth" is expected for LPNs in residential care facilities, physicians offices, clinics, health maintenance organizations, and in the temporary help sector. *HORIZONS* states "In Illinois, 'licensed practical nurse' is projected to be among both the 50 fastest growing occupations and the 50 occupations with the greatest number of annual job openings." However, IOICC supply and demand data show 1,200 annual job openings for LPNs, but 1,600 graduates, indicating an oversupply. Highland Community College cited a decrease in the number of acute care positions for LPNs, both in terms of clinical experiences prior to graduation and in employment opportunities after graduation. Similarly, Rend Lake College reports that a large hospital in its district is phasing out LPN positions. Yet, in general, community colleges indicated graduates are finding jobs because of demands in long-term care facilities and in hospitals where employers are hiring LPNs to replace RNs where possible as a cost-cutting measure. Morton College wrote that the demand for LPNs is increasing along with the levels of responsibility, wages, and fringe benefits for the position.

Cost-Effectiveness of LPN Programs

The unit cost for LPN programs is considerably less than that of RN programs. At $155.55, fiscal year 1995 statewide unit cost averages indicate that LPN unit costs are only 55 percent of ADN unit cost averages (Appendix C, Table 4-C). Possible explanations for this are that clinical experiences in LPN programs are not as extensive and courses may not be as restrictive, thereby generating larger enrollments which drive down unit costs. As can be seen from Table 2, compared to five years ago, the distribution of expenditures for LPN programs has changed substantially. The proportion of expenditures going for salaries decreased from 42 percent to 39 percent. The proportion of expenditures for equipment went from less than 1 percent to over 3 percent, reflecting the types of improvements needed to maintain up-to-date educational experiences. Many of the cost-cutting measures implemented by community colleges and reported in the section on ADN programs apply to LPN programs as well.

Table 2

PERCENTAGE DISTRIBUTION OF
UNIT COST EXPENDITURES BY EXPENDITURE TYPE
FOR LPN PROGRAMS: FY 1990-1995

Fiscal Year	Direct Salary	Direct Dept.	Equipment	Allocated Costs	Oper. & Maint.	Bldg. Rental
FY 1990	42.02%	11.18%	.67%	35.73%	9.51%	.88%
FY 1995	38.75%	8.72%	3.02%	39.27%	9.97%	.26%

Evidence of Quality in LPN Programs

Program review reports provided similar findings of quality as those written in the reviews of RN programs. Well-qualified and dedicated faculty, strong clinical affiliations and community support, and excellent licensure pass rates were a few of the predominant quality features listed. In addition, colleges noted improvements in articulation and increases in technological applications. The continuing need to promote minority recruitment, intensify efforts to deal with student attrition, and ensure that curricula and clinical experiences relate to changing conditions in the health care industry were areas in which colleges focused attention.

Articulation. As reported earlier, results from the 1994 follow-up survey show nearly 31 percent of the LPN graduates were pursuing additional education with most of it occurring in a related field. Colleges sensitive to this occurrence described expanding efforts in the area of articulation. Some colleges, such as Spoon River, have increased the amount of general education in certain areas to ease articulation into the ADN program. Others, including Lewis & Clark Community College report that the prerequisites for both the LPN and ADN programs are identical, which facilitates transition from one program into the other. In addition, 80 percent of Lewis & Clark's LPN program requirements are contained in the ADN program and LPN graduates who reside in the district are guaranteed admission to ADN program if they choose to matriculate. Likewise, graduates of Kaskaskia College who successfully complete the LPN program and the licensing exam are given advanced standing in Kaskaskia's ADN program. John Wood Community College has had an articulation agreement with the Quincy Area Vocational Technical Center's CNA program since 1986. Students may be given advanced standing or credit toward LPN course requirements for content taken at the lower level. Other institutions are adopting the recently developed nursing articulation model. Brochures, catalog descriptions, and advisor contacts are additional examples of methods colleges utilize to inform students of articulation advantages.

Student Satisfaction Levels. High levels of student satisfaction with LPN programs were noted by several colleges. A statewide perspective on graduate satisfaction was published in the *1994 Follow-Up Study*. Respondents to the survey awarded satisfaction ratings of program components

based on a five-point scale. The average rating by LPN graduates for all program components was 4.17, with highest ratings given to Course Content: 4.41, and lowest ratings ascribed to Labor Market Employment Information: 3.83. Other ratings were as follows: Lecture/Lab Experiences: 4.30, Equipment/Facilities/Materials: 4.17, Job Preparation: 4.07, and Preparation for Further Education: 4.24.

Licensure Pass Rates. Numerous colleges reported high percentages of passing rates on licensing exams, and Illinois Central College, Parkland College and John Wood Community College are adding computerized preparation programs to help students prepare for exams. The Illinois Community College Board plans to obtain statewide licensure passage rates in the near future.

Improvements in Student Retention. A common thread in all nursing program reports is concern regarding attrition and efforts to improve student success. This section of many reports was the most innovative and extensive. Examples of college efforts to strengthen retention include curricular revisions, heightened admission standards, improved assessment and placement, expanded recruitment efforts, and job readiness seminars. Southeastern Illinois College has established chemistry as a prerequisite for its Anatomy and Physiology course, and various colleges reported utilizing computer-assisted instruction to improve students' acquisition of skills. Danville Area Community College credits a low dropout rate to efficient pre-testing and required prerequisites. Rend Lake College is adopting a pre-nursing entrance exam consisting of reading and math components. Black Hawk College heightened the minimum passing percentage within its college nursing courses, which has resulted in an increase in licensure pass rates. Similarly, Parkland College increased the minimum selective admissions score for nursing students. John A. Logan College will add "DeskLab" to assist LPN students in remediating math deficiencies. Illinois Central College has developed a course to assist at-risk students who are prospective LPN students. The course provides career information and job shadowing experiences and helps students determine whether a health occupation is an appropriate choice for them. Kennedy-King College has a job readiness seminar for graduates for one week at the end of its LPN program. Kennedy-King, Black Hawk College, and Harry S Truman College have implemented more flexible scheduling to help students balance personal and academic responsibilities. John Wood Community College and Kaskaskia College are increasing efforts to recruit males and minority students. Harry S Truman College reports that, although the percent of male nurses employed in Illinois is only 3-5 percent, 30 percent of its LPN students are male.

Accreditation. According to the National League of Nursing, four community colleges have LPN programs which are accredited by the League. They are Illinois Central College, Lake Land College, Parkland College, and Triton College. Applications for NLN-accreditation are currently pending for LPN programs at Black Hawk College, Highland Community College, and Carl Sandburg College. Applications are in process at Danville Area Community College and South Suburban College.

Other examples of ways community colleges are improving programs were reported by Danville Area Community College, which visited area nursing programs to assess the best aspects of each and will modify its program accordingly. Carl Sandburg College will hold a strategic planning

session in preparation for curricular modifications in line with a changing job market for nursing graduates.

Licensed Practical Nursing Program Summary

Community college program review reports indicate that most colleges planned only minor revisions to their LPN programs. One institution planned to significantly modify its program. Colleges reported that the need for LPNs was documented by enrollments, job placement of graduates, and labor market demand data. Systemwide, nearly 3,500 students were enrolled in LPN programs in fiscal year 1995. Over the past five years, enrollments crested in 1993 and declined in the following two years. Completion trend data follows the same pattern. Results from the *Occupational Follow-Up Study* show that nine out of ten fiscal year 1993 graduates were employed with most of them practicing in a related field. Nearly one-third of the respondents were pursuing additional education. Graduates' annual salaries averaged $21,008. While IOICC data show an oversupply of LPN graduates for the number of available jobs, its publication, HORIZONS, indicates that licensed practical nurses are projected to be among the 50 fastest growing occupations and 50 occupations with the largest number of annual job openings. If future staffing preferences favor LPNs over RNs, demand will remain strong. If, however, employers employ additional CNAs and unlicensed personnel, demand will likely diminish. The costs of LPN programs are slightly more than half of ADN programs. Possible explanations for this are that clinical experiences are not as extensive and courses may not be as restrictive, thereby generating larger enrollments which drive down unit costs. College reports on the quality of LPN programs acclaimed faculty, strong clinical affiliations, excellent licensure pass rates, improvements in articulation, and increases in technological applications. Colleges noted the continuing need to promote minority recruitment, intensify efforts to improve retention, and ensure curricula and clinical experiences relate to changing conditions in the health care industry.

LPN Program Recommendations

- **Colleges with LPN programs should monitor the local labor market.** Just as in the Registered Nursing area, there are mixed assessments of what the future labor market needs will be for LPNs both in terms of demand and changing employment settings. Close observation of job placement trends and continuous communication with local employers will help assess what is happening. Educational and clinical experiences will need to adapt to changing labor market needs in the health industry as they occur.

- **Colleges should continue to develop strategies to improve student retention in LPN programs.** Colleges which have not already done so can benefit from developing tracking mechanisms to assist in monitoring retention and identifying potential problems early. Colleges are encouraged to try strategies used effectively by other colleges, as noted in this report.

- **Colleges should implement the statewide nursing articulation model**. Expedient matriculation from CNA to LPN to ADN to BSN level programs will become increasingly important. Full implementation of the statewide nursing articulation model should be beneficial to those students and professionals seeking opportunities for advancement in a career ladder.

Certified Nurse Assistants

Program Offerings. Certified Nurse Assistant (CNA) programs provide skills for entry-level employment in a short time frame with the length of certificates ranging from five to eleven semester credit hours. Students are job ready within one semester, which appeals to both students and employers alike. Thirty-six community colleges are approved to offer occupational Certified Nursing Assistant programs. However, the remainder of the colleges are approved to offer the short-term vocational skills courses needed to qualify for students for nurse assistant certification. All but three of these latter colleges trained CNA students during fiscal year 1995. Community colleges only offer a small percentage of the 271 approved Certified Nursing Assistant programs in the state. The Illinois Department of Public Health (IDPH), rather than the Illinois Department of Professional Regulation, externally approves training programs which may be located in a variety of settings, including hospitals, nursing homes, and educational institutions.

Results from Community College Program Reviews of CNA Programs. Colleges examined CNA curricula using the required criteria of need, quality, and cost-effectiveness. Reports on the status of CNA certificates showed that 34 colleges found programs to be viable and needing only minor changes. One college planned to significantly modify its program and another planned to conduct a supplemental review in fiscal year 1996. Another institution was unable to comply with the statewide schedule and will conduct its review in 1996.

CNA Program Need

CNA Enrollments. Over 3,000 students were enrolled during fiscal year 1995 in occupational CNA programs. This number does not include the students enrolled in vocational skills nursing assistant courses. One college alone offered over 29,000 vocational skills credit hours in this area. If one assumes that even one-half of these hours were generated in the basic certified nurse assistant courses, an additional 1,500 students would be added to the program enrollment of 3,000. Over the past five years, overall growth of 9.6 percent has occurred for CNA program enrollments statewide. Appendix D, Table 1-D, shows that CNA enrollments peaked in 1992, dropped to a five-year low in 1994, and made a substantial comeback in 1995. The effect of the 1994-1995 change was an increase of 11.2 percent. Approximately the same number of colleges experienced increases in enrollments as those which experienced declines. Sizeable five-year enrollment gains were noted at Carl Sandburg College, South Suburban College, Lincoln Land Community College, and Triton College.

CNA Completions. Coinciding with enrollments, the number of students completing CNA programs was at its highest level in 1992. Completions then declined, but rebounded in 1995 and still remain above those reported in 1991. An overall statewide increase of 23.6 percent was noted over the five-year period from 1991 to 1995 as the number of graduates climbed from 1,214 to 1,501 (Appendix D, Table 2-D).

Job Placement of CNA Graduates. Less than one-third of fiscal year 1993 graduates (454 of 1,426 = 32.0 percent) responded to the 1994 follow-up survey (Appendix D, Table 3-D). Of those, 77.3 percent were employed with over three-fourths in full-time jobs (*1994 Follow-Up Study*, Table A-2). For those colleges with a sufficient number of respondents, employment rates varied from the low 40s to the upper 80s. CNA graduate respondents had the highest percentage (79.1 percent) working in the district where they received their education when compared to all nursing graduate respondents. Thirty-five percent were continuing their education. Slightly more than 8 percent were unemployed and seeking work. Respondents' average hourly salary was $6.29 per hour. *HORIZONS* reports the average starting wage for nursing assistants statewide is $4.62 per hour with salaries for all CNAs ranging up to $7.00 per hour. A comparison of salaries for ADN, LPN, and CNA graduates is shown in Figure 2.

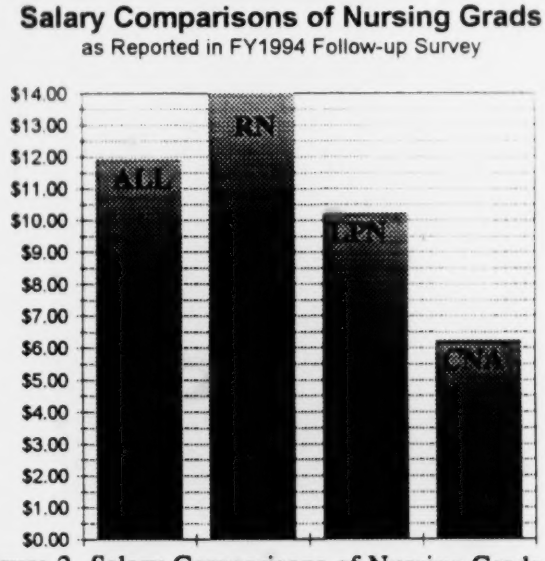

Figure 2. Salary Comparisons of Nursing Grads

Labor Market Demand. Currently, the majority of nursing assistants are employed in nursing homes (47.8 percent) and hospitals (26.2 percent). The growing number of elderly citizens should intensify the demand for workers in nursing homes. *HORIZONS* states, "In Illinois, 'nurse aide' is one of the 50 fastest growing occupations and one of the 50 occupations expected to have the greatest number of job openings each year." McHenry County College reported that a review of classified advertisements in a weekend edition of one local paper showed 38 job openings for CNAs. Employment demand is influenced by a high job turnover rate which occurs because of low wages, undesirable shifts, and strenuous tasks. In its program review summary, Lewis & Clark Community College stated, "According to a national report, 23 percent of nursing aides must be replaced annually." Rock Valley College added the perspective that employers have difficulty hiring sufficient numbers of Certified Nursing Assistants when higher paying jobs are available.

Cost-Effectiveness of CNA Programs

Unit costs of Certified Nursing Assistant programs closely parallel those of Practical Nursing curricula with the statewide average for fiscal year 1995 being $160.94 (Appendix D, Table 4-D). Colleges are able to maintain lower costs in these programs because faculty are more likely to be part-time and instruction does not require the investment in high tech equipment and the multitude of supplies used by lengthier, more intensive ADN programs. Classrooms and laboratory space are shared among all nursing programs. Despite the relatively low unit cost of CNA programs, colleges seek ways to offer instruction more economically. For example, Shawnee Community College's lower-than-average program costs are the result of cooperative arrangements with the regional office of education, local hospitals, and nursing homes. Shawnee's program became associated with one offered by the Regional Office of Education in fiscal year 1995. Such efforts allow scarce funds to be prioritized and reallocated.

Evidence of Quality in Certified Nursing Assistant Programs

Faculty were listed as a major strength of CNA programs, and several colleges described staff development efforts to further teaching and learning activities. To illustrate, Moraine Valley Community College is promoting faculty networking and the use of course evaluations. Curricular innovations were included in numerous reports. At Danville Area Community College, CNA students receive CPR training and are certified once the program is completed. The college's advisory council recommended development of a course that would focus on work ethics, job application and interview techniques, tours of nursing homes, employer presentations, and job shadowing opportunities.

College reports also credited active and supportive advisory committees, excellent facilities, and increasing technology as evidence of quality. To meet area demand, John Wood Community College expended considerable effort in recruitment activities for its CNA program. The college held an informational and "brainstorming" luncheon with employers and representatives of social service agencies to gather ideas and discuss ways to provide additional needed nurse assistants. The college also conducted a campaign to improve the image of the CNA by means of a promotional poster and pens, television coverage, and a "CNA of the Year" award. Parkland College's program includes measurable learning outcomes and computer-based tests which afford immediate feedback to students.

Student Satisfaction Levels. Respondents to the 1994 follow-up survey gave high satisfaction ratings to CNA program components. Overall, the average rating for CNA graduates, which was based on a five-point scale, was 4.23. Respondents rated lecture lab experiences highest at 4.40. The lowest ratings were awarded to labor market information at 3.80. Ratings of other indicators were as follows: Course Content: 4.36, Equipment/Facilities/Materials: 4.33, Job Preparation: 4.32, and Preparation for Further Education: 4.14.

Articulation. In the area of articulation, Rock Valley College plans to provide nurse assistant instruction to high school students in the Health Occupations Youth Apprenticeship Program. Lake Land College offers advanced placement in health occupations courses for tech prep students, and McHenry County College plans to pilot test its program with high school students. Several colleges have created career ladders with LPN or ADN programs. These institutions include Kishwaukee College, Kennedy-King College, and Wilbur Wright College.

Improvements in Student Retention. College reports noted concerns about student attrition. Approximately half of the students enrolled in CNA courses complete them. Colleges described a variety of efforts to resolve these attrition problems. Parkland College developed an alternative to traditional daytime instruction by offering an evening course once per year. Shawnee Community College is conducting CNA training at off-campus locations. Triton College plans to increase tutoring and financial aid opportunities to address two primary reasons for student attrition. Kaskaskia College will concentrate retention efforts on tutoring, counseling, and remedial coursework. Waubonsee Community College intends to strengthen assessment, and Illinois Central College will upgrade its reading requirement and seek suggestions on improving retention from its program advisory committee.

CNA Program Summary

Program review reports indicated that most colleges found CNA curricula to be strong and responsive to community and student needs. Thirty-four institutions planned to initiate only minor changes, one college will make substantial modifications to its program, and one withdrew its curricula because it is offering its CNA training through vocational skills. (At least seven colleges are offering training outside the approved occupational program arena through vocational skills coursework). Enrollments and completions increased both short term and over the most recent five-year period. Less than one-third of the 1993 CNA graduates responded to the Occupational Follow-Up Survey. Over 77 percent of those responding were working and three-quarters of them were in full-time positions. Low compensation accompanies the relative low skill levels associated with CNA training as respondents' hourly wages averaged $6.29. Thirty-five percent were pursuing additional education. Nurse Aide is one of the 50 fastest growing occupations and one of the 50 occupations expected to have the greatest number of openings a year. Job opportunities are influenced by high job turnover, which is often attributed to low wages, undesirable shifts, and strenuous tasks. Unit costs for CNA programs are similar to those assigned in LPN programs. Part-time faculty and limited investments in high tech equipment help to curb costs. Report sections on program quality credited faculty, high student satisfaction levels, articulation efforts and improvements in student retention. Approximately one-half of the students who enroll in CNA training complete the courses.

Recommendations for CNA Programs

- **Colleges should continue to seek ways to improve retention.** Although the program is of short duration, attrition is relatively high. The CNA retention section of this report provides other examples of methods used by colleges to improve retention.

- **Colleges should implement the statewide nursing articulation model.** Institutions which are implementing the model have established bridge programs or offer advanced standing to completers to promote career advancement opportunities should be emulated.

- **Colleges should improve accessibility of labor market and career guidance information to students.** Graduates ranked labor market information lowest of all program components on the follow-up survey, which indicates improvement is warranted. Given the nature of nursing assistant jobs, programs which include information on workplace characteristics, job seeking, and workplace basic skills would also be helpful in increasing student awareness and their likelihood of being successful on the job.

- **Colleges offering certified nurse assistant training through vocational skills courses should seek approval to offer these courses as occupational programs**. Colleges without approved occupational CNA programs generated 32,500 credit hours through CNA vocational skills training during fiscal year 1995. At 8 credit hours per CNA training per person, these hours are the equivalent of over 4,000 students for which there are currently no programmatic enrollment or completion data. Without these data, information on the supply of trained CNAs is severely undercounted.

Home Health Aide

Program Offerings. The Illinois Department of Public Health (IDPH) also approves training programs for home health aides. Only one such program is currently active in the community college system. It is located at McHenry County College and consists of eleven semester credit hours. In the past few years, several colleges have offered home health aide training, but student interest has been limited. McHenry has developed a plan to increase enrollments through a cooperative program with area high schools.

A likely explanation for the limited number of home health aide programs in the community college system is the similarity to CNA training and the shared state certification between CNAs and Home Health Aides. The Illinois Department of Public Health provides certification for nurse aides which covers home health, hospice, nursing, home, hospital, and temporary staffing agencies. Although the Department provides certification, it does not provide a separate registry for home health aides. Therefore, graduates of Certified Nursing Assistant programs are qualified to work in nurse aide or home health aide capacities.

The increasing need for home health aides is apparent in labor market projections. It is expected that, by the year 2005, home health aide will surpass all other occupations in the race for the fastest growing occupation. Employment growth in this occupation is projected to be 138.0 percent from 1992 to 2005 with average growth per year at 16.4 percent. In 1994, the U.S. Department of Labor reported that this industry added more jobs than any other health services area. Hiring practices are not easily discernible in industry projection data because home health aide services often are delivered by hospitals rather than private agencies, thereby attributing to undercounting in the industry. Compensation for Home Health Aides is similar to wages earned by CNAs.

It does not appear prudent to recommend that community colleges add home health aide programs, given the certification practices in Illinois, even though this is an area of great demand. Instead, colleges are urged to compare curricular requirements for standard nurse assistant and home health aide programs and consider incorporating training which will prepare students for this growing segment of the industry. Students should continue to be made aware of job opportunities in this area.

CONCLUSIONS

Since 1983, community colleges have used a process of program review established by the Illinois Community College Board to ensure programs continue to serve the state well. A recent revision to this process required that all colleges report on a specified group of occupational programs. In fiscal year 1995, this group included nursing programs, which contain the largest number of enrollments and completions of all community college programs in four-digit CIP code categories. The size of this program area and potential changes in the health care industry seemed to warrant a special analysis; therefore, this report was written.

Colleges used the criteria of need, cost-effectiveness, and quality and found programs to be strong and responsive. Specifically, the need for nursing curricula was demonstrated by substantial labor market demand, high enrollments, and excellent job placement rates.

College reports further identified programs as cost-effective. The costs of LPN and CNA programs remain below the average for all occupational programs, while ADN program costs run higher than most programs colleges offer because of low student/faculty ratios, their heavy clinical experience components, and an increasing emphasis on technology. Colleges implemented innovative methods to reduce costs, including identifying supplemental funding sources, securing clinical instructors and equipment through area hospitals, and cost-effective rental agreements for equipment and facilities.

College reports on the quality of nursing curricula gave high marks to programs. As evidence, colleges cited high levels of student satisfaction, high passage rates on licensure exams, improvements in nursing program facilities including technology upgrades, and program accreditation. While citing improvements in retention and articulation for all three levels of nursing, most colleges noted the need for continuing efforts in these areas.

Despite the many areas in which community college nursing programs excel, several challenges remain. Changes in the health care industry indicate potential changes in demand for the various levels of nursing at differing health care employment settings. Predictions vary from source to source, making reliable assessments of future need problematic. Colleges, therefore, must continue to monitor trends closely by analyzing the needs within their local areas through placement data and information from area employers. Emerging trends will need to be reflected in the nursing curricula and in the information provided to current and potential students.

Furthermore, costs remain high for ADN programs. Budgetary restraints at community colleges warrant the development of cost-containment strategies that will enable ADN programs to maintain their current high levels of quality, as well as to continue to provide improvements (such as the incorporation of the latest technology enhancements), which graduates will need to be familiar with as they enter the workplace.

Articulation remains a challenge for several colleges not only for their own CNA, LPN, and ADN programs, but also to make transitions from high school to community college to senior institution programs as smooth as possible for students. The Illinois Articulation Initiative nursing articulation model should help alleviate many of the existing problems. Likewise, although progress has been made in retention of students within their programs, efforts need to continue.

The individual sections on ADN, LPN, and CNA programs contain recommendations for each area. Some of these recommendations are similar for multiple program areas and are listed below in a single combined recommendation addressing multiple nursing programs. Others are specific to a given program.

Recommendations

- **Colleges should monitor carefully the local job market for ADN, LPN, and CNA graduates.** Program enrollment caps may need to be adjusted as the labor market changes. To assist the colleges with this activity, the **ICCB should provide annual information from state administrative databases to help colleges monitor job placement of graduates.** Locally, colleges can obtain valuable insights into changing conditions through close contact with employers in various health care settings.

- **Colleges should continue to seek ways to improve student retention in ADN, LPN, and CNA programs.** In addition to reviewing the information colleges presented in their program review reports which was presented in this report, colleges may refer to the September 1995 ICCB report, *Accountability and Productivity: Retention Initiatives in the Illinois Community College System,* which highlights a variety of methods utilized by colleges in the system.

- **Colleges should adopt the statewide nursing articulation model**. Expedient matriculation from CNA to LPN to ADN to BSN level programs will become increasingly important.

Full implementation of the statewide nursing articulation model should be beneficial to those students and professionals seeking opportunities for advancement in a career ladder.

- **Colleges should examine ADN program costs.** Sources of high costs should be identified and strategies developed to reduce these without compromising program quality. Exceptionally low costs may indicate a need to increase levels of technology in order to improve student learning and offer educational opportunities which parallel those found in the workplace.

- **Colleges should improve accessibility of labor market and career guidance information to students.** Graduates ranked labor market information lowest of all program components on the follow-up survey which indicates improvement is warranted. Given the nature of nursing assistant jobs, in particular, programs which include information on workplace characteristics, job seeking, and workplace basic skills would also be helpful in increasing student awareness and the likelihood of being successful on the job.

- **Colleges offering Certified Nurse Assistant training through vocational skills courses should seek approval to offer these courses as an approved occupational program.** Colleges without approved occupational CNA programs generated 32,500 credit hours through CNA vocational skills training during fiscal year 1995. At eight credit hours per CNA training per person, these hours are the equivalent of over 4,000 students for which there are currently no programmatic enrollment or completion data. Without these data, information on trained supply of CNAs is severely undercounted.

BIBLIOGRAPHY

City Colleges of Chicago. (Summer 1995). *Research Briefs*, [Volume 4, Number 2]. Chicago Illinois. p. 8.

Cowley, Geoffrey, et. al. (February 13, 1995). *Intensive Care on a Budget*. Newsweek. p. 86.

Gardner, Jennifer; Hipple, Steven & Nardone, Thomas. (February 1994). *The Labor Market Improves in 1993*. Monthly Labor Review. p 3-13.

Gordon, Suzanne. (February 13, 1995). *Is There a Nurse in the House?* The Nation. pp. 199-202.

Illinois Community College Board. (October 1994). *1994 Follow-Up Study of Fiscal Year 1993 Occupational Program Graduates*. Springfield, Illinois: Author.

Illinois Community College Board. (1991, 1992, 1993, 1994, 1995). *Data and Characteristics of the Illinois Public Community College System*. Springfield, Illinois: Author.

Illinois Community College Board. (January 1996). *Student Enrollments and Completions in the Illinois Community College System*. Springfield, Illinois: Author.

Illinois Board of Higher Education. (May 4, 1993). Policy Issues in Education for the Health Professions. Springfield, Illinois: Author.

Illinois Board of Higher Education. (September 3, 1992). *1992 Assessment of the Educational Needs in Health Professions Programs*. Springfield, Illinois: Author.

Illinois Board of Higher Education. (April 1995). *Illinois Articulation Initiative in Nursing Education*. Springfield, Illinois: Author.

Illinois Department of Employment Security. (October 1994). Illinois Labor Market Review. Chicago, Illinois: Author.

Illinois Occupational Information Coordinating Committee. (1996). HORIZONS Occupational Information. Springfield, Illinois: Author.

Morris, Rick. (November, 1995). *Aging Baby Boomers Are an Untapped Market*, Best's Review--Life/Health Insurance Edition. pp 52-53.

Pew Health Professions Commission. (November 1995). *Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century*. San Francisco, CA: Author.

Plunkert, Lois M. & Hayghe, Howard V. (February 1995). *Strong Employment Gains Continue in 1994*. [Volume 118, Number 2]. Monthly Labor Review. p 3-17.

Richman, Louis. (July 12, 1993). *Jobs That Are Growing and Slowing*, Fortune. p 52-53.

U. S. Department of Commerce. (March 1995). Census and You. [Volume 30, No. 3]. Washington, D. C.: Author.

U.S. Department of Labor. (May 1992). Occupational Outlook Handbook. pp 159-162, 194-195, 292-294. Washington, D. C.: Author.

U. S. Department of Labor. (1990). Occupational Projections and Training Data. Washington, D. C.: Author.

U.S. Department of Labor. (Fall 1993). *The American Work Force: 1992-2005*. Occupational Outlook Quarterly. Washington, D. C.: Author.

The World Future Society. (1994). *An American Renaissance in the Year 2000*. Bethesda, Maryland: Cetron, Marvin.

The World Future Society. (1994). *Outlook '95*. Bethesda, Maryland: Author.

APPENDIX A

DIFFERENTIATING CHARACTERISTICS OF NURSING PROGRAMS

Level:	**Registered Nurse (RN)**
Award:	Associate Degree
Duration:	**2 years full-time** or its equivalent (from 61 to 76 semester credit hours)
Skills:	"General responsibilities include nursing care of patients, teaching health care (to LPNs, CNAs, etc.), counseling, patient assessment, analyzing lab reports, and operating various types of equipment such as respirators and EKG machines. RNs may also oversee the work of other workers." (*Horizons* 1996, p. 512)
Exam:	National Council Licensure Examination for Registered Nurse (NCLEX-RN)
License:	Illinois Department of Professional Regulation
Renewal:	Every 2 years, no mandatory continuing education.

Level:	**Licensed Practical Nurse (LPN)**
Award:	Advanced Certificate
Duration:	**1 - 1.5 years full-time** or its equivalent (from 34 to 49 semester credit hours)
Skills:	"Under the supervision of registered nurses or physicians, they administer certain medications, monitor equipment, change dressings, take temperatures and blood pressures and assist patients with personal hygiene. Private duty LPNs care for a single patient in the home or hospital. They may do housekeeping as well." (*Horizons* 1996, p. 515)
Exam:	National Council Licensure Examination for Practical Nurse (NCLEX-PN)
License:	Illinois Department of Professional Regulation
Renewal:	Every 2 years, no mandatory continuing education.

Level:	**Certified Nursing Assistants (CNA)**
Award:	Basic Certificate
Duration:	**.5 years or less** (from 5 to 11 semester credit hours)
Skills:	"Nursing Assistants perform routine tasks in caring for patients. Under the direction of nurses, their duties include aiding patients in getting out of bed and walking; giving back rubs and bathing and shaving patients; taking temperatures; serving food and assisting in feeding; and cleaning rooms and changing bed linens." (*Horizons* 1996, p. 519-520)
Exam:	Illinois Nurse Aid Competency Evaluation
Registration:	Illinois Department of Public Health
Renewal:	Indefinite, no mandatory continuing education. (Persons who do not practice in the field for 24 months --employer monitored-- are no longer approved and must complete the entire program of study again or its equivalent, undergo a background check, and pass the examination as new applicants.

Level:	**Home Health Aide (HHA)**
Award:	Basic Certificate
Duration:	**.5 years or less** (11 semester credit hours)
Skills:	"Home health aides provide personal care and home management services to allow patients to live in their own homes. Home health aides usually work under the supervision of a physician or registered nurse. They help patients bathe, exercise, and dress. They check the temperature, blood pressure, and pulse and respiration rates to evaluate the condition of patients. Aides may give massages and help give medicines. They may teach patients how to adapt to changes caused by disability, frailty, or illness." (*Horizons* 1996, p. 521-522)
Exam:	Illinois Nurse Aid Competency Evaluation
Registration:	Illinois Department of Public Health (Considered as Nurse Aids)
Renewal:	Indefinite, no mandatory continuing education. (Persons who do not practice in the field for 24 months --employer monitored-- are no longer approved and must complete the entire program of study again or its equivalent, undergo a background check, and pass the examination as new applicants.)

APPENDIX B

DATA TABLES FOR ASSOCIATE DEGREE NURSING (ADN) PROGRAMS

Illinois Community College Board

Table 1-B

**ANNUAL UNDUPLICATED ENROLLMENT IN
ASSOCIATE DEGREE/REGISTERED NURSING BY COLLEGE
CIP 12.511601 (formerly 12.181101)**

Dist. No.	District/College	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	1991-1995 % Change	1994-1995 % Change
522	Belleville	256	271	232	156	138	-46.1%	-11.5%
503	Black Hawk	693	700	727	692	622	-10.2%	-10.1%
508	Chicago	(1,199)	(1,016)	(1,058)	(1,112)	(1,063)	(-11.3%)	(-4.4%)
	Daley	150	115	136	180	169	12.7%	-6.1%
	Kennedy-King	167	181	221	271	258	54.5%	-4.8%
	Malcolm X	327	299	245	190	184	-43.7%	-3.2%
	Olive-Harvey	277	257	252	210	195	-29.6%	-7.1%
	Truman	278	164	204	261	257	-7.6%	-1.5%
502	DuPage	814	951	954	924	791	-2.8%	-14.4%
509	Elgin	459	563	731	907	850	85.2%	-6.3%
512	Harper	579	810	816	795	721	24.5%	-9.3%
540	Heartland	–	–	20	115	170	–	47.8%
519	Highland	198	272	242	218	220	11.1%	0.9%
514	Illinois Central	833	975	1,038	886	794	-4.7%	-10.4%
529	Illinois Eastern	(262)	(243)	(233)	(238)	(220)	(-16.0%)	(-7.6%)
	Olney Central	262	243	233	238	220	-16.0%	-7.6%
513	Illinois Valley	167	275	346	187	188	12.6%	0.5%
525	Joliet	386	435	408	371	391	1.3%	5.4%
520	Kankakee	359	513	556	460	412	14.8%	-10.4%
501	Kaskaskia	381	527	245	260	249	-34.6%	-4.2%
523	Kishwaukee	111	122	115	96	102	-8.1%	6.3%
532	Lake County	781	592	476	337	411	-47.4%	22.0%
517	Lake Land	74	140	302	307	269	263.5%	-12.4%
536	Lewis & Clark	555	689	727	715	222	-60.0%	-69.0%
526	Lincoln Land	191	200	192	226	210	9.9%	-7.1%
530	Logan	57	62	68	88	98	71.9%	11.4%
524	Moraine Valley	238	221	245	223	236	-0.8%	5.8%
527	Morton	108	129	126	148	145	34.3%	-2.0%
535	Oakton	145	155	166	185	215	48.3%	16.2%
505	Parkland	448	603	559	454	409	-8.7%	-9.9%
515	Prairie State	274	360	797	817	696	154.0%	-14.8%
521	Rend Lake	77	66	64	99	109	41.6%	10.1%
537	Richland	–	–	195	262	266	–	1.5%
511	Rock Valley	148	220	320	302	415	180.4%	37.4%
518	Sandburg	125	133	155	208	304	143.2%	46.2%
506	Sauk Valley	110	220	261	225	182	65.5%	-19.1%
531	Shawnee	34	37	41	69	77	126.5%	11.6%
510	South Suburban	929	1,121	1,413	1,359	1,163	25.2%	-14.4%
533	Southeastern	59	110	85	69	73	23.7%	5.8%
534	Spoon River*	–	–	–	–	–	–	–
601	State Community	65	61	37	54	46	-29.2%	-14.8%
504	Triton	367	402	403	431	481	31.1%	11.6%
516	Waubonsee	497	625	717	701	598	20.3%	-14.7%
539	Wood	225	231	171	101	56	-75.1%	-44.6%
	TOTALS	12,204	14,050	15,241	14,797	13,612	11.5%	-8.0%

* New ADN program started in fiscal year 1996.

SOURCE OF DATA: ICCB Annual Enrollment and Completion (A1) Files

Illinois Community College Board

Table 2-B

ANNUAL DUPLICATED COMPLETERS
IN ASSOCIATE DEGREE/REGISTERED NURSING BY COLLEGE
CIP 12.511601 (formerly 12.181101)

Dist No	District/College	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	1991-1995 % Change	1994-1995 % Change
522	Belleville	39	53	45	40	36	-7.7%	-10.0%
503	Black Hawk	41	54	158	51	57	39.0%	11.8%
508	Chicago	(187)	(219)	(241)	(268)	(225)	(20.3%)	(-16.0%)
	Daley	30	47	37	56	43	43.3%	-23.2%
	Kennedy-King	25	31	32	55	65	160.0%	18.2%
	Malcolm X	40	40	51	37	45	12.5%	21.6%
	Olive-Harvey	37	37	52	49	52	40.5%	6.1%
	Truman	55	64	69	71	62	12.7%	-12.7%
502	DuPage	80	69	98	95	80	0.0%	-15.8%
509	Elgin	41	65	52	87	80	95.1%	-8.0%
512	Harper	116	125	118	113	112	-3.4%	-0.9%
540	Heartland	–	–	0	9	28	–	211.1%
519	Highland	27	44	40	39	44	63.0%	12.8%
514	Illinois Central	53	49	58	53	54	1.9%	1.9%
529	Illinois Eastern	(114)	(120)	(124)	(131)	(130)	(14.0%)	(-0.8%)
	Olney Central	114	120	124	131	130	14.0%	-0.8%
513	Illinois Valley	38	51	60	87	85	123.7%	-2.3%
525	Joliet	68	98	78	102	95	39.7%	-6.9%
520	Kankakee	29	52	57	61	60	106.9%	-1.6%
501	Kaskaskia	38	78	88	85	80	110.5%	-5.9%
523	Kishwaukee	42	53	54	47	38	-9.5%	-19.1%
532	Lake County	78	130	73	65	80	2.6%	23.1%
517	Lake Land	41	52	42	52	49	19.5%	-5.8%
536	Lewis & Clark	64	71	88	82	61	-4.7%	-25.6%
526	Lincoln Land	84	88	98	109	100	19.0%	-8.3%
530	Logan	18	31	38	35	55	205.6%	57.1%
524	Moraine Valley	66	85	84	89	75	13.6%	-15.7%
527	Morton	28	38	38	66	54	92.9%	-18.2%
535	Oakton	53	56	53	61	73	37.7%	19.7%
505	Parkland	132	150	154	183	113	-14.4%	-38.3%
515	Prairie State	69	66	75	78	76	15.2%	-2.6%
521	Rend Lake	55	55	53	52	77	40.0%	48.1%
537	Richland	–	–	–	–	24	–	–
511	Rock Valley	39	43	48	41	44	12.8%	7.3%
518	Sandburg	26	34	44	57	52	100.0%	-8.8%
506	Sauk Valley	24	19	27	27	24	0.0%	-11.1%
531	Shawnee	32	38	29	41	30	-6.3%	-26.8%
510	South Suburban	71	73	104	86	91	28.2%	5.8%
533	Southeastern	45	35	21	39	43	-4.4%	10.3%
534	Spoon River*	–	–	–	–	–	–	–
601	State Comm. Coll.	20	8	7	25	25	25.0%	0.0%
504	Triton	97	111	130	94	146	50.5%	55.3%
516	Waubonsee	36	50	50	58	55	52.8%	-5.2%
539	Wood	2	3	16	7	24	1100.0%	242.9%
	TOTALS	1,990	2,366	2,543	2,615	2,617	31.5%	0.1%

* New ADN program started in fiscal year 1996.

SOURCE OF DATA: Annual Enrollment and Completion (A1) Files

Illinois Community College Board

Table 3-B

OCCUPATIONAL FOLLOW-UP SUMMARY BY COLLEGE AND CIP
ASSOCIATE DEGREE NURSING/REGISTERED NURSE - 511601

Dist. No.	District/College	Number Surveyed	Number Responding	Response Rate	Employment Rate	Continuing Education Rate
522	Belleville	45	27	60.0%	96.3%	0.0%
503	Black Hawk	146	37	25.3%	94.6%	45.9%
508	Chicago	(239)	(68)	(28.5%)	(95.6%)	(16.2%)
	Daley	37	20	54.1%	90.0%	5.0%
	Kennedy-King	32	6	18.8%	100.0%	0.0%
	Malcolm X	46	10	21.7%	100.0%	20.0%
	Olive-Harvey	52	8	15.4%	100.0%	25.0%
	Truman	71	24	33.8%	95.8%	25.0%
502	DuPage	100	72	72.0%	97.2%	8.3%
509	Elgin	53	23	43.4%	100.0%	4.3%
512	Harper	118	101	85.6%	96.0%	8.9%
540	Heartland	–	–	–	–	–
519	Highland	43	22	51.2%	86.4%	18.2%
514	Illinois Central	58	30	51.7%	96.7%	13.3%
529	Illinois Eastern	(42)	(25)	(59.5%)	(100.0%)	(20.0%)
	Olney Central	42	25	59.5%	100.0%	20.0%
513	Illinois Valley	60	43	71.7%	100.0%	25.6%
525	Joliet	77	46	59.7%	95.6%	4.3%
520	Kankakee	57	26	45.6%	100.0%	7.7%
501	Kaskaskia	87	59	67.8%	96.6%	11.9%
523	Kishwaukee	54	22	40.7%	100.0%	0.0%
532	Lake County	73	42	57.5%	97.6%	16.7%
517	Lake Land	65	36	55.4%	94.4%	25.0%
536	Lewis & Clark	85	61	71.8%	98.4%	14.8%
526	Lincoln Land	98	56	57.1%	98.2%	12.5%
530	Logan	29	18	62.1%	94.4%	16.7%
524	Moraine Valley	84	41	48.8%	95.3%	4.9%
527	Morton	38	11	28.9%	100.0%	9.1%
535	Oakton	53	17	32.1%	94.1%	17.6%
505	Parkland	150	113	75.3%	93.3%	2.7%
515	Prairie State	75	29	38.7%	98.0%	13.8%
521	Rend Lake	52	33	63.5%	100.0%	12.1%
511	Rock Valley	39	25	64.1%	92.3%	12.0%
518	Sandburg	42	22	52.4%	100.0%	4.5%
506	Sauk Valley	27	19	70.4%	100.0%	21.1%
531	Shawnee	26	14	53.8%	100.0%	0.0%
510	South Suburban	104	63	60.6%	100.0%	14.3%
533	Southeastern	17	10	58.8%	100.0%	20.0%
534	Spoon River*	–	–	–	–	–
601	State Community	6	2	33.3%	100.0%	50.0%
504	Triton	129	37	28.7%	94.6%	24.3%
516	Waubonsee	50	17	34.0%	94.1%	23.5%
539	Wood	17	3	17.6%	100.0%	33.3%
	TOTALS	2,437	1,270	52.1%	96.7%	13.0%

* New ADN program started in fiscal year 1996.

SOURCE OF DATA: Fiscal Year 1994 Occupational Follow-up Data

Illinois Community College Board

Table 4-B

ASSOCIATE DEGREE (REGISTERED NURSING) UNIT COST AVERAGES BY COLLEGE WITHIN PEER GROUP

	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	Average FY91-FY95	% Change FY91-FY95	% Change FY94-FY95
State Average	$240.07	$243.06	$243.19	$255.82	$283.92	$253.21	18.3%	11.0%
Group 1: Enrollment generally below 3,000 headcount - Downstate, Located in or near communities of less than 50,000 population								
Sandburg	$162.29	$138.25	$189.88	$189.88	$190.31	$174.12	17.3%	0.2%
State Community	$257.17	$261.82	DNA	$174.05	$181.29	$204.17	-29.5%	4.2%
Shawnee	$115.85	$112.23	$67.93	$180.57	$114.53	$118.22	-1.1%	-36.6%
Southeastern	$153.22	$148.06	$177.32	$180.15	$189.52	$169.65	23.7%	5.2%
Spoon River	NA	NA	NA	NA	NA	NA	NA	NA
John Wood	$187.89	$229.96	$248.61	$245.43	$239.58	$230.29	27.5%	-2.4%
Group 2: Enrollment approximately 3,000 to 4,000 headcount - Downstate, Located in or near communities of less than 50,000 population								
Danville	NA	NA	NA	NA	NA	NA	NA	NA
Highland	$136.07	$136.35	$165.96	$132.84	$162.40	$146.72	19.4%	22.3%
Kaskaskia	$147.93	$147.41	$150.74	$179.00	$180.42	$161.10	22.0%	0.8%
Kishwaukee	$173.88	$158.91	$161.43	$178.82	$197.51	$174.11	13.6%	10.5%
Rend Lake	$96.49	$134.75	$57.28	$120.49	$131.55	$108.11	36.3%	9.2%
Sauk Valley	$224.07	$238.32	$219.12	$248.27	$269.18	$239.79	20.1%	8.4%
Group 3: Enrollment greater than 4,000 headcount - Downstate, Located in or near communities of less than 50,000 population								
Illinois Eastern								
Frontier	NA	NA	NA	NA	NA	NA	NA	NA
Olney Central	$318.91	$308.33	$148.41	$150.78	$362.32	$257.75	13.6%	140.3%
Lincoln Trail	NA	NA	NA	NA	NA	NA	NA	NA
Wabash	NA	NA	NA	NA	NA	NA	NA	NA
Illinois Valley	$139.15	$138.29	$142.56	$159.78	$183.70	$144.95	32.0%	15.0%
Kankakee	$170.11	$154.04	$162.34	$177.63	$185.31	$169.89	8.9%	4.3%
Lake Land	$159.29	$153.80	$166.54	$195.97	$196.18	$174.36	23.2%	0.1%
Lewis & Clark	$179.31	$167.15	$163.16	$251.11	$246.28	$206.93	37.3%	-1.9%
Logan	$180.81	$166.83	$187.76	$170.76	$161.36	$173.50	-10.8%	-5.5%
McHenry	NA	NA	NA	NA	NA	NA	NA	NA

Illinois Community College Board

Table 4-B (Continued)

ASSOCIATE DEGREE (REGISTERED NURSING) UNIT COST AVERAGES BY COLLEGE WITHIN PEER GROUP

Group 4: Located downstate and in urbanized areas	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	College Average FY91-FY95	% Change FY91-FY95	% Change FY94-FY95
Belleville	$254.24	$247.01	$266.04	$291.86	$355.47	$282.92	39.8%	21.8%
Black Hawk	$239.62	$213.58	$192.39	$233.70	$216.70	$219.20	-9.6%	-7.3%
Heartland	NA	NA	NA	NA	$197.48	$197.48	NA	NA
Illinois Central	$250.38	$266.51	$239.83	$284.63	$288.52	$265.97	15.2%	1.4%
Lincoln Land	$349.25	$301.77	$292.97	$314.11	$341.55	$319.93	-2.2%	8.7%
Parkland	$201.80	$207.16	$226.69	$251.50	$291.42	$235.71	44.4%	15.9%
Richland	NA	NA	NA	$155.08	$189.37	$172.23	NA	22.1%
Rock Valley	$207.63	$219.62	$235.97	$264.19	$280.63	$241.61	35.2%	6.2%
Group 5: Enrollment less than 10,000 headcount, Located in the Chicago metropolitan area.								
Elgin	$238.54	$231.30	$261.64	$305.99	$333.87	$274.27	40.0%	9.1%
Morton	$249.91	$251.57	$267.92	$239.75	$259.72	$253.77	3.9%	8.3%
Prairie State	$225.51	$222.65	$248.61	$257.97	$260.33	$243.01	15.4%	0.9%
South Suburban	$215.85	$216.55	$224.55	$223.31	$271.55	$230.36	25.8%	21.6%
Waubonsee	$194.65	$193.73	$202.18	$192.28	$211.09	$198.79	8.4%	9.8%
Group 6: City Colleges of Chicago								
Daley	$279.10	$309.73	$325.78	$302.90	$303.04	$304.11	8.6%	0.0%
Kennedy-King	$363.25	$322.84	$313.20	$252.64	$541.19	$358.62	49.0%	114.2%
Malcolm X	$280.33	$277.88	$330.33	$396.67	$436.34	$344.27	55.7%	10.0%
Olive-Harvey	$299.99	$375.48	$387.80	$388.79	$470.70	$384.55	56.9%	21.1%
Truman	$280.26	$299.76	$303.36	$264.68	$304.25	$290.46	8.6%	15.0%
Washington	NA	NA	NA	NA	NA	NA	NA	NA
Wright	NA	NA	NA	NA	NA	NA	NA	NA
Group 7: Enrollment greater than 10,000 headcount, Located in the Chicago metropolitan area.								
DuPage	$226.56	$270.69	$220.84	$269.87	$300.32	$257.66	32.6%	11.3%
Harper	$291.84	$307.10	$326.13	$338.47	$339.80	$320.67	16.4%	0.4%
Joliet	$345.06	$300.54	$319.79	$305.66	$352.75	$324.76	2.2%	15.4%
Lake County	$322.62	$364.86	$342.79	$375.10	$357.45	$352.56	10.8%	-4.7%
Moraine Valley	$285.66	$350.84	$282.83	$326.12	$397.19	$328.53	39.0%	21.8%
Oakton	$324.84	$359.71	$340.15	$296.01	$309.39	$326.02	-4.8%	4.5%
Triton	$283.08	$272.97	$275.32	$308.53	$295.13	$287.01	4.3%	-4.3%

NA = Not Applicable

SOURCE OF DATA: Unit Cost Submissions

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APPENDIX C

DATA TABLES FOR LICENSED PRACTICAL NURSING (LPN) PROGRAMS

Illinois Community College Board

Table 1-C

**ANNUAL UNDUPLICATED ENROLLMENT IN
PRACTICAL NURSING (LPN) PROGRAMS BY COLLEGE
CIP 12.511613 (formerly 12.170605)**

Dist. No.	District/College	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	1991-1995 % Change	1994-1995 % Change
503	Black Hawk	208	249	272	235	220	5.8%	-6.4%
508	Chicago	(791)	(578)	(557)	(567)	(618)	(-21.9%)	(9.0%)
	City-Wide	791	578	552	–	–	–	–
	Kennedy-King	–	–	–	–	13	–	–
	Washington	–	–	5	567	605	–	6.7%
	Wilbur-Wright*	–	–	–	–	–	–	–
507	Danville	60	64	91	64	72	20.0%	12.5%
502	DuPage	23	18	21	12	7	-69.6%	-41.7%
509	Elgin	–	–	1	1	4	–	300.0%
512	Harper	7	7	5	3	2	-71.4%	-33.3%
540	Heartland	–	–	32	43	48	–	11.6%
519	Highland	132	128	135	136	124	-6.1%	-8.8%
514	Illinois Central	0	140	163	168	155	–	-7.7%
529	Illinois Eastern	(41)	(92)	(86)	(84)	(98)	(139.0%)	(16.7%)
	Olney Central	41	92	86	84	98	139.0%	16.7%
513	Illinois Valley	76	143	136	46	40	-47.4%	-13.0%
520	Kankakee	185	206	215	206	160	-13.5%	-22.3%
501	Kaskaskia	136	173	47	74	76	-44.1%	2.7%
523	Kishwaukee	–	–	1	16	0	–	-100.0%
517	Lake Land	65	82	178	190	165	153.8%	-13.2%
536	Lewis & Clark	0	0	0	0	34	–	–
530	Logan	90	100	129	129	123	36.7%	-4.7%
527	Morton**	0	0	0	0	0	–	–
535	Oakton**	0	0	0	0	0	–	–
505	Parkland	39	58	57	50	59	51.3%	18.0%
521	Rend Lake	117	109	140	197	180	53.8%	-8.6%
518	Sandburg	70	69	71	81	86	22.9%	6.2%
506	Sauk Valley	64	113	107	86	87	35.9%	1.2%
531	Shawnee	104	115	180	160	150	44.2%	-6.3%
510	South Suburban	318	298	264	257	246	-22.6%	-4.3%
533	Southeastern	190	206	215	201	188	-1.1%	-6.5%
534	Spoon River	126	132	145	159	132	4.8%	-17.0%
504	Triton	255	280	256	266	306	20.0%	15.0%
539	Wood	159	146	149	144	104	-34.6%	-27.8%
	TOTALS	3,256	3,506	3,653	3,575	3,484	7.0%	-2.5%

* New LPN program started in fiscal year 1996
**Enrollments included in ADN enrollments

SOURCE OF DATA: ICCB Annual Enrollment and Completion (A1) Files

Illinois Community College Board

Table 2-C

ANNUAL DUPLICATED COMPLETERS
IN PRACTICAL NURSING (LPN) PROGRAMS BY COLLEGE
CIP 12.511613 (formerly 12.170605)

Dist. No	District/College	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	1991-1995 % Change	1994-1995 % Change
503	Black Hawk	38	66	118	58	55	44.7%	-5.2%
508	Chicago	(135)	(90)	(79)	(85)	(108)	(-20.0%)	(27.1%)
	City-Wide	135	90	79	–	–	–	–
	Kennedy-King	0	0	0	0	36	–	–
	Washington	0	0	0	85	72	–	-15.3%
	Wilbur Wright*	0	0	0	0	0	–	–
507	Danville	35	30	36	28	29	-17.1%	3.6%
502	DuPage	0	0	0	0	0	–	–
509	Elgin	55	58	79	75	66	20.0%	-12.0%
512	Harper	44	55	45	49	48	9.1%	-2.0%
540	Heartland	–	–	0	2	3	–	50.0%
519	Highland	11	35	28	23	1	-90.9%	-95.7%
514	Illinois Central	0	0	10	11	11	–	0.0%
529	Illinois Eastern	(37)	(101)	(116)	(125)	(126)	(240.5%)	(0.8%)
	Olney Central	37	101	116	125	126	240.5%	0.8%
513	Illinois Valley	13	35	27	21	21	61.5%	0.0%
520	Kankakee	33	33	28	40	34	3.0%	-15.0%
501	Kaskaskia	39	36	31	31	31	-20.5%	0.0%
523	Kishwaukee	10	15	11	15	2	-80.0%	-86.7%
517	Lake Land	0	22	44	30	35	–	16.7%
530	Logan	37	51	42	68	70	89.2%	2.9%
527	Morton	0	0	0	27	1	–	-96.3%
535	Oakton	0	2	0	0	0	–	–
505	Parkland	13	18	28	24	25	92.3%	4.2%
521	Rend Lake	64	58	85	55	28	-56.3%	-49.1%
518	Sandburg	24	34	32	33	34	41.7%	3.0%
506	Sauk Valley	19	20	19	14	21	10.5%	50.0%
531	Shawnee	35	42	38	72	52	48.6%	-27.8%
510	South Suburban	41	25	32	28	16	-61.0%	-42.9%
533	Southeastern	57	98	113	113	87	52.6%	-23.0%
534	Spoon River	40	36	39	42	42	5.0%	0.0%
504	Triton	94	95	79	80	85	-9.6%	6.3%
539	Wood	47	46	28	26	39	-17.0%	50.0%
	TOTALS	921	1,101	1,187	1,175	1,070	16.2%	-8.9%

* New LPN program started in fiscal year 1996

SOURCE OF DATA: Annual Enrollment and Completion (A1) Files

Illinois Community College Board

Table 3-C

OCCUPATIONAL FOLLOW-UP SUMMARY BY COLLEGE AND CIP
LICENSED PRACTICAL NURSING - 511613

Dist. No.	District/College	Number Surveyed	Number Responding	Response Rate	Employment Rate	Continuing Education Rate
503	Black Hawk	113	21	18.6%	85.7%	19.0%
508	Chicago	(78)	(8)	(10.3%)	(87.5%)	(37.5%)
	City-Wide	--	--	--	--	--
	Kennedy-King	--	--	--	--	--
	Washington	78	8	10.3%	87.5%	37.5%
	Wilbur Wright*	--	--	--	--	--
507	Danville	36	31	86.1%	96.8%	6.5%
502	DuPage	--	--	--	--	--
509	Elgin	75	29	38.7%	86.2%	58.6%
512	Harper	5	3	60.0%	100.0%	33.3%
540	Heartland	--	--	--	--	--
519	Highland	25	11	44.0%	90.9%	27.3%
514	Illinois Central	10	1	10.0%	100.0%	100.0%
529	Illinois Eastern	(115)	(51)	(44.3%)	(88.2%)	(21.6%)
	Olney Central	115	51	44.3%	88.2%	21.6%
513	Illinois Valley	27	17	63.0%	94.1%	35.3%
520	Kankakee	28	18	64.3%	88.9%	27.8%
501	Kaskaskia	31	21	67.7%	85.7%	28.6%
523	Kishwaukee	11	0	0.0%	--	--
517	Lake Land	33	31	93.9%	80.6%	38.7%
530	Logan	42	25	59.5%	100.0%	44.0%
527	Morton	--	--	--	--	--
535	Oakton	--	--	--	--	--
505	Parkland	28	18	64.3%	89.5%	11.1%
521	Rend Lake	74	26	35.1%	92.3%	46.2%
518	Sandburg	32	11	34.4%	83.3%	36.4%
506	Sauk Valley	19	9	47.4%	100.0%	22.2%
531	Shawnee	33	13	39.4%	84.6%	30.8%
510	South Suburban	32	22	68.8%	91.3%	22.7%
533	Southeastern	103	53	51.5%	92.5%	26.4%
534	Spoon River	39	18	46.2%	100.0%	16.7%
504	Triton	79	22	27.8%	95.8%	54.5%
539	Wood	28	2	7.1%	100.0%	100.0%
	TOTALS	1,096	461	42.1%	90.8%	30.8%

* New LPN Program started in fiscal year 1996

SOURCE OF DATA: Fiscal Year 1994 Occupational Follow-up Data

Illinois Community College Board

Table 4-C

LICENSED PRACTICAL NURSING UNIT COST AVERAGES BY COLLEGE WITHIN PEER GROUP

	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	Average FY 91-FY95	% Change FY91-FY95	% Change FY94-FY95
State Average	$147.28	$144.52	$131.17	$149.56	$155.55	$145.62	5.6%	4.0%
Group 1: Enrollment generally below 3,000 headcount - Downstate, Located in or near communities of less than 50,000 population								
Sandburg	$177.56	$162.03	$184.25	$184.25	$287.68	$199.15	62.0%	56.1%
State Community	NA	NA	NA	NA	NA	NA	NA	NA
Shawnee	$159.31	$117.33	$38.04	$179.43	$152.59	$129.34	-4.2%	-15.0%
Southeastern	$122.98	$118.12	$111.50	$125.67	$141.60	$123.97	15.1%	12.7%
Spoon River	$140.17	$137.06	$153.58	$147.26	$417.87	$199.19	198.1%	NA
John Wood	$172.50	$154.77	$183.90	$229.57	$240.69	$196.29	39.5%	4.8%
Group 2: Enrollment approximately 3,000 to 4,000 headcount - Downstate, Located in or near communities of less than 50,000 population								
Danville	$143.34	$133.22	$123.06	263.24	311.04	$311.04	117.0%	18.2%
Highland	$103.64	$127.78	$121.44	$185.37	$287.98	$165.24	177.9%	55.4%
Kaskaskia	$110.84	$109.86	$119.54	$125.50	$132.24	$119.60	19.3%	5.4%
Kishwaukee	$199.08	$150.84	$201.48	$195.19	$178.63	$185.04	-10.3%	-8.5%
Rend Lake	$114.55	$90.09	$57.28	$63.94	$104.85	$86.14	-8.5%	64.0%
Sauk Valley	$143.40	$182.48	$187.20	$210.71	$222.55	$189.27	55.2%	5.6%
Group 3: Enrollment greater than 4,000 headcount - Downstate, Located in or near communities of less than 50,000 population								
Illinois Eastern								
Frontier	NA	NA	NA	NA	NA	NA	NA	NA
Olney Central	$61.20	$60.24	$148.41	$150.78	$51.98	$94.52	-15.1%	-65.5%
Lincoln Trail	NA	NA	NA	NA	NA	NA	NA	NA
Wabash	NA	NA	NA	NA	NA	NA	NA	NA
Illinois Valley	$132.61	$141.69	$142.56	$159.78	$183.70	$152.07	38.5%	15.0%
Kankakee	$159.77	$143.55	$162.34	$177.63	$185.31	$165.72	16.0%	4.3%
Lake Land	$120.75	$113.88	$166.54	$195.97	$196.18	$158.66	62.5%	0.1%
Lewis & Clark	NA	NA	$187.76	$251.11	$246.28	$137.03	NA	-1.9%
Logan	$215.64	$194.88	$187.76	$170.76	$219.76	$197.76	1.9%	28.7%
McHenry	NA	NA	NA	NA	NA	NA	NA	NA

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Illinois Community College Board

Table 4-C (Continued)

LICENSED PRACTICAL NURSING UNIT COST AVERAGES BY COLLEGE WITHIN PEER GROUP

Group 4: Located downstate and in urbanized areas	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	College Average FY91-FY95	% Change FY91-FY95	% Change FY94-FY95
Belleville	NA	NA	NA	NA	NA	NA	NA	NA
Black Hawk	$101.27	$105.88	$104.54	$122.16	$140.45	$114.86	38.7%	15.0%
Heartland	NA	NA	NA	NA	$197.47	$197.47	NA	NA
Illinois Central	NA	$284.25	$278.74	$274.72	$249.66	$271.84	NA	-9.1%
Lincoln Land	$157.68	$175.77	$163.26	$196.13	$228.10	$184.19	44.7%	16.3%
Parkland	$232.85	$213.50	$226.69	$267.96	$277.71	$243.74	19.3%	3.6%
Richland	NA	NA	NA	$132.93	$180.05	$132.93	NA	0.0%
Rock Valley	NA	NA	NA	NA	NA	NA	NA	NA
Group 5: Enrollment less than 10,000 headcount, Located in the Chicago metropolitan area.								
Elgin	$238.47	NA	NA	NA	NA	NA	NA	NA
Morton	NA	NA	NA	NA	NA	NA	NA	NA
Prairie State	NA	NA	$248.61	NA	NA	$248.61	NA	NA
South Suburban	$107.81	$108.51	$131.40	$137.29	$147.48	$131.17	36.8%	7.4%
Waubonsee	NA	NA	NA	NA	NA	NA	NA	NA
Group 6: City Colleges of Chicago								
Daley	NA	NA	NA	NA	NA	NA	NA	NA
Kennedy-King	NA	NA	NA	NA	NA	NA	NA	NA
Malcolm X	$235.66	$108.44	$113.58	$388.50	NA	$152.63	-100.0%	-100.0%
Olive-Harvey	NA	NA	NA	NA	NA	NA	NA	NA
Truman	NA	NA	NA	NA	NA	NA	NA	NA
Washington	NA	NA	NA	$118.27	$73.99	NA	NA	NA
Wright	$127.97	$106.00	$168.53	$88.78	$282.63	NA	NA	NA
Group 7: Enrollment greater than 10,000 headcount, Located in the Chicago metropilitan area.								
DuPage	$194.69	$268.71	$169.30	$144.66	$288.27	$217.74	48.1%	99.3%
Harper	NA	NA	NA	NA	NA	NA	NA	NA
Joliet	NA	NA	NA	NA	NA	NA	NA	NA
Lake County	NA	NA	NA	NA	NA	NA	NA	NA
Moraine Valley	$164.93	$244.27	$180.52	$211.97	$318.68	$238.86	93.2%	50.3%
Oakton	NA	NA	NA	NA	NA	NA	NA	NA
Triton	$191.74	$204.70	$221.78	$220.71	$221.92	$217.28	15.7%	0.5%

NA = Not Applicable

SOURCE OF DATA: Unit Cost Submissions

BEST COPY AVAILABLE

APPENDIX D

DATA TABLES FOR CERTIFIED NURSE ASSISTANT (CNA) PROGRAMS

Illinois Community College Board

Table 1-D

**ANNUAL UNDUPLICATED ENROLLMENT IN
NURSE AIDE/ASSISTANTS (CNA) PROGRAMS BY COLLEGE
CIP 12.511614 (formerly 12.170602)**

Dist. No.	District/College	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	1991-1995 % Change	1994-1995 % Change
522	Belleville	169	153	178	160	130	-23.1%	-18.8%
503	Black Hawk	111	141	10	79	99	-10.8%	25.3%
508	Chicago	(273)	(295)	(255)	(194)	(299)	(9.5%)	(54.1%)
	City-Wide	273	295	252	–	–	–	–
	Kennedy-King	0	0	0	0	25	–	–
	Washington	0	0	3	194	274	–	41.2%
502	Danville	84	97	65	55	59	-29.8%	7.3%
507	DuPage	0	0	0	0	73	–	–
519	Highland	61	18	45	35	44	-27.9%	25.7%
514	Illinois Central	106	89	83	80	87	-17.9%	8.8%
529	Illinois Eastern	(190)	(127)	(94)	(80)	(117)	(38.4%)	(46.3%)
	Frontier	95	69	39	30	42	-55.8%	40.0%
	Lincoln Trail	26	22	26	16	36	38.5%	125.0%
	Olney Central	25	13	24	28	23	-8.0%	-17.9%
	Wabash Valley	44	23	5	6	16	-63.6%	166.7%
513	Illinois Valley	41	56	73	56	49	19.5%	-12.5%
525	Joliet	114	122	128	135	143	25.4%	5.9%
520	Kankakee	9	15	20	8	21	133.3%	162.5%
501	Kaskaskia	85	72	77	44	28	-67.1%	-36.4%
523	Kishwaukee	44	47	63	40	39	-11.4%	-2.5%
517	Lake Land	104	151	173	111	102	-1.9%	-8.1%
536	Lewis & Clark	152	165	171	165	174	14.5%	5.5%
526	Lincoln Land	31	87	114	90	98	216.1%	8.9%
530	Logan	38	63	83	71	68	78.9%	-4.2%
528	McHenry	74	74	80	98	109	47.3%	11.2%
524	Moraine Valley	0	0	0	1	0	–	-100.0%
527	Morton	32	31	17	20	27	-15.6%	35.0%
535	Oakton	0	0	0	0	3	–	–
505	Parkland	64	135	120	69	60	-6.3%	-13.0%
515	Prairie State	33	55	17	22	74	124.2%	236.4%
521	Rend Lake	88	122	109	131	98	11.4%	-25.2%
511	Rock Valley	200	246	254	260	210	5.0%	-19.2%
518	Sandburg	7	5	21	38	90	1185.7%	136.8%
506	Sauk Valley	62	59	50	22	18	-71.0%	-18.2%
531	Shawnee	65	79	55	57	23	-64.6%	-59.6%
510	South Suburban	74	82	86	107	235	217.6%	119.6%
534	Spoon River	117	95	108	97	82	-29.9%	-15.5%
601	State Community	86	60	157	125	86	0.0%	-31.2%
504	Triton	55	71	78	135	160	190.9%	18.5%
516	Waubonsee	124	120	97	82	87	-29.8%	6.1%
539	Wood	103	198	168	90	73	-29.1%	-18.9%
	TOTALS	2,796	3,130	3,049	2,757	3,065	9.6%	11.2%

SOURCE OF DATA: ICCB Annual Enrollment and Completion (A1) Files

Illinois Community College Board

Table 2-D

**ANNUAL DUPLICATED COMPLETERS
IN NURSE AIDE/ASSISTANTS (CNA) BY COLLEGE
CIP 12.511614 (formerly 12.170602)**

Dist No	District/College	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	1991-1995 % Change	1994-1995 % Change
522	Belleville	135	84	0	5	155	14.8%	3000.0%
503	Black Hawk	0	9	2	0	0	–	–
508	Chicago	(186)	(234)	(211)	(116)	(192)	(2.2%)	(63.8%)
	City-Wide	186	234	211	–	–	–	–
	Kennedy-King	0	0	0	0	65	–	–
	Washington	0	0	0	116	127	–	9.5%
507	Danville	62	12	29	0	0	-100.0%	–
502	DuPage	0	0	0	0	0	–	–
519	Highland	1	0	0	0	0	-100.0%	–
514	Illinois Central	1	1	0	0	3	200.0%	–
529	Illinois Eastern	(25)	(10)	(21)	(75)	(139)	(324.0%)	(41.3%)
	Frontier	2	1	1	23	53	2550.0%	130.4%
	Lincoln Trail	0	0	0	9	15	–	66.7%
	Olney Central	22	9	20	25	27	22.7%	8.0%
	Wabash	1	0	0	18	44	4300.0%	144.4%
513	Illinois Valley	0	0	1	13	41	–	215.4%
525	Joliet	2	0	0	0	0	-100.0%	–
520	Kankakee	1	1	1	1	0	-100.0%	-100.0%
501	Kaskaskia	0	0	0	0	0	–	–
523	Kishwaukee	55	59	68	52	52	-5.5%	0.0%
517	Lake Land	57	149	52	105	64	12.3%	-39.0%
536	Lewis & Clark	147	225	208	181	134	-8.8%	-26.0%
526	Lincoln Land	0	0	0	0	0	–	–
530	Logan	0	0	0	0	0	–	–
528	McHenry	97	112	108	128	137	41.2%	7.0%
527	Morton	0	0	0	0	1	–	–
535	Oakton	17	16	0	0	26	52.9%	–
505	Parkland	0	2	1	0	0	–	–
515	Prairie State	0	0	0	0	0	–	–
521	Rend Lake	0	0	115	121	100	–	-17.4%
511	Rock Valley	0	237	242	230	175	–	-23.9%
518	Sandburg	0	0	0	0	0	–	–
506	Sauk Valley	69	45	70	26	21	-69.6%	-19.2%
531	Shawnee	45	35	37	30	0	-100.0%	-100.0%
510	South Suburban	0	0	0	0	47	–	–
534	Spoon River	0	0	0	0	0	–	–
601	State Comm. Coll.	45	10	16	20	5	-88.9%	-75.0%
504	Triton	0	0	0	2	2	–	0.0%
516	Waubonsee	158	159	130	132	126	-20.3%	-4.5%
539	Wood	111	118	114	115	81	-27.0%	-29.6%
	TOTALS	1,214	1,518	1,426	1,352	1,501	23.6%	11.0%

SOURCE OF DATA: Annual Enrollment and Completion (A1) Files

Illinois Community College Board

Table 3-D

OCCUPATIONAL FOLLOW-UP SUMMARY BY COLLEGE AND CIP
CERTIFIED NURSING ASSISTANT - 511614

Dist. No.	District/College	Number Surveyed	Number Responding	Response Rate	Employment Rate	Continuing Education Rate
522	Belleville	–	–	–	–	–
503	Black Hawk	2	1	50.0%	100.0%	0.0%
508	Chicago	(211)	(8)	(3.8%)	(50.0%)	(25.0%)
	City-Wide	–	–	–	–	–
	Kennedy-King	–	–	–	–	–
	Washington	211	8	3.8%	50.0%	25.0%
507	Danville	29	19	65.5%	42.1%	15.8%
502	DuPage	–	–	–	–	–
519	Highland	–	–	–	–	–
514	Illinois Central	–	–	–	–	–
529	Illinois Eastern	(99)	(41)	(41.4%)	(77.5%)	(31.7%)
	Frontier	58	17	29.3%	82.4%	23.5%
	Lincoln Trail	21	16	76.2%	68.8%	50.0%
	Olney Central	20	8	40.0%	85.7%	12.5%
	Wabash	–	–	–	–	–
513	Illinois Valley	1	1	100.0%	100.0%	0.0%
525	Joliet	–	–	–	–	–
520	Kankakee	1	1	100.0%	100.0%	100.0%
523	Kishwaukee	68	10	14.7%	70.0%	10.0%
517	Lake Land	48	0	0.0%	–	–
536	Lewis & Clark	206	89	43.2%	75.8%	23.6%
526	Lincoln Land	–	–	–	–	–
530	Logan	–	–	–	–	–
528	McHenry	109	73	67.0%	79.5%	38.4%
524	Moraine Valley	–	–	–	–	–
527	Morton	–	–	–	–	–
535	Oakton	–	–	–	–	–
505	Parkland	1	0	0.0%	–	–
515	Prairie State	–	–	–	–	–
521	Rend Lake	114	47	41.2%	70.8%	21.3%
511	Rock Valley	202	51	25.2%	82.7%	31.4%
518	Sandburg	–	–	–	–	–
506	Sauk Valley	69	31	44.9%	87.1%	29.0%
531	Shawnee	36	8	22.2%	87.5%	25.0%
510	South Suburban	–	–	–	–	–
534	Spoon River	–	–	–	–	–
601	State Community	16	3	18.8%	66.7%	33.3%
504	Triton	–	–	–	–	–
516	Waubonsee	128	39	30.5%	89.7%	41.0%
539	Wood	113	32	28.3%	78.8%	40.6%
	TOTALS	1,453	454	31.2%	77.3%	30.0%

SOURCE OF DATA: Fiscal Year 1994 Occupational Follow-up Data

Illinois Community College Board

Table 4-D

CERTIFIED NURSE ASSISTANT UNIT COSY AVERAGES BY COLLEGE WITHIN PEER GROUPS

	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	Average FY 91-FY95	% Change FY91-FY95	% Change FY94-FY95
State Average	$133.44	$131.25	$139.93	$151.60	$160.94	$143.43	20.6%	6.2%
Group 1: Enrollment generally below 3,000 headcount - Downstate, Located in or near communities of less than 50,000 population								
Sandburg	$103.44	$106.37	$105.18	$105.18	$168.67	$117.77	63.1%	60.4%
State Community	$152.48	$185.85	DNA	$136.78	$185.14	$174.49	21.4%	NA
Shawnee	$141.95	$122.12	$131.20	$179.45	$222.42	$159.43	56.7%	23.9%
Southeastern	NA	NA	$105.76	NA	$440.63	$105.76	NA	NA
Spoon River	$100.05	$99.52	$96.95	$110.61	$87.05	$98.84	NA	-21.3%
John Wood	NA	NA	NA	NA	NA	NA	NA	NA
Group 2: Enrollment approximately 3,000 to 4,000 headcount - Downstate, Located in or near communities of less than 50,000 population								
Danville	$130.76	$112.13	$121.84	$138.09	$158.19	$132.20	21.0%	14.6%
Highland	$121.75	$94.93	$116.22	$240.36	$224.72	$159.60	84.6%	-6.5%
Kaskaskia	$88.53	$98.57	$90.61	$95.16	$101.18	$94.81	14.3%	6.3%
Kishwaukee	$214.56	$246.17	$237.71	$221.89	$242.37	$232.54	13.0%	9.2%
Rend Lake	$107.00	$96.14	$92.86	$248.39	$131.55	$135.19	22.9%	-47.0%
Sauk Valley	$105.33	$120.65	$126.55	$174.69	$198.35	$145.11	88.3%	13.5%
Group 3: Enrollment greater than 4,000 headcount - Downstate, Located in or near communities of less than 50,000 population								
Illinois Eastern								
Frontier	$51.23	$50.15	$58.79	$76.99	$83.39	$64.11	62.8%	8.3%
Olney Central	$87.89	$65.36	$234.32	$240.18	$51.98	$135.95	-40.9%	-78.4%
Lincoln Trail	$81.76	$88.16	$91.37	$105.17	$89.60	$91.21	9.6%	-14.8%
Wabash	$39.24	$47.22	$33.14	$47.78	$69.94	$47.46	78.2%	46.4%
Illinois Valley	$112.28	$121.97	$124.17	$154.10	$206.39	$143.78	83.8%	33.9%
Kankakee	$122.96	$113.64	$125.38	$138.85	$129.13	$125.99	5.0%	-7.0%
Lake Land	$79.29	$89.87	$81.26	$99.37	$96.90	$89.34	22.2%	-2.5%
Lewis & Clark	$126.59	$110.59	$123.73	$145.03	$141.02	$129.39	11.4%	-2.8%
Logan	$195.89	$150.16	$121.29	$129.37	$134.75	$146.29	-31.2%	4.2%
McHenry	$194.60	$158.40	$221.42	$192.04	$233.27	$199.95	19.9%	21.5%

Illinois Community College Board

Table 4-D (Continued)

CERTIFIED NURSE ASSISTANT UNIT COSY AVERAGES BY COLLEGE WITHIN PEER GROUPS

Group 4: Located downstate and in urbanized areas	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	College Average FY91-FY95	% Change FY91-FY95	% Change FY94-FY95
Belleville	$156.14	$160.72	$145.87	$167.17	$205.77	$167.13	31.8%	23.1%
Black Hawk	$103.82	$110.85	$123.21	$130.98	$119.17	$117.61	14.8%	-9.0%
Heartland	NA	NA	NA	NA	$197.48	$39.50	NA	NA
Illinois Central	$180.38	$210.82	$230.84	$233.62	$241.97	$219.53	34.1%	3.6%
Lincoln Land	$148.01	$133.12	$137.80	$151.14	$170.51	$148.12	15.2%	12.8%
Parkland	$258.71	$173.36	$128.51	$134.86	$128.31	$164.75	-50.4%	-4.9%
Richland	NA	NA	$104.14	NA	NA	$20.83	NA	NA
Rock Valley	$122.49	$128.86	$134.74	$136.37	$149.94	$134.48	22.4%	10.0%
Group 5: Enrollment less than 10,000 headcount, Located in the Chicago metropolitan area.								
Elgin	$238.51	$231.30	$261.61	$157.76	$162.34	$210.30	-31.9%	2.9%
Morton	$117.75	$119.36	$211.42	$531.48	$290.43	$254.09	146.6%	-45.4%
Prairie State	$225.51	$222.65	$248.61	$257.96	$260.33	$243.01	15.4%	0.9%
South Suburban	$133.20	$133.90	$160.53	$168.39	$174.57	$154.12	31.1%	3.7%
Waubonsee	$115.61	$129.25	$140.14	$138.91	$143.19	$133.42	23.9%	3.1%
Group 6: City Colleges of Chicago								
Daley	NA	NA	$72.21	NA	NA	NA	NA	NA
Kennedy-King	NA	NA	NA	NA	NA	NA	NA	NA
Malcolm X	NA	NA	$158.18	DNA	$77.33	NA	NA	NA
Olive-Harvey	NA	NA	$87.17	NA	NA	NA	NA	NA
Truman	NA	NA	$70.71	NA	NA	NA	NA	NA
Washington	NA	NA	NA	$171.81	$108.79	NA	NA	NA
Wright	NA	NA	$91.02	NA	NA	NA	NA	NA
Group 7: Enrollment greater than 10,000 headcount, Located in the Chicago metropolitan area.								
DuPage	$120.16	$124.43	$144.05	$147.44	$171.57	$146.87	42.8%	16.4%
Harper	NA	NA	$150.63	NA	NA	$37.66	NA	NA
Joliet	$150.30	$135.63	$152.83	$135.76	$127.88	$138.03	-14.9%	-5.8%
Lake County	NA	NA	$141.88	NA	NA	$35.47	NA	NA
Moraine Valley	NA	NA	$121.18	NA	NA	$30.30	NA	NA
Oakton	NA	NA	$80.90	NA	NA	$20.23	NA	NA
Triton	$133.59	$122.13	$128.40	$137.98	$149.65	$134.54	12.0%	8.5%

NA = Not Applicable

SOURCE OF DATA: Unit Cost Submissions

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APPENDIX E

CURRICULUM ARTICULATION IN NURSING

Table 1–E

CURRICULUM ARTICULATION IN NURSING (option 1)

	High School	Community College	University
	Certification: Nursing Assistant *15 units required for college admission*	*A.A./A.S. in Pre-Nursing*	*B.S. in Nursing*
General Education		**General Education Core**[1]	**General Education Core**[1]
Communication	4 years: reading/writing, speaking/listening and literature	6 cr. composition 3 cr. speech	6 cr. composition 3 cr. speech
Math	3 years: algebra I, geometry, algebra II	3-6 cr. math	3-6 cr. math (statistics/computer)
Science	3 years: biology, chemistry, & physics	4 cr. biology (general) 4 cr. chemistry (general/inorganic)	4 cr. biology (general) 4 cr. chemistry (general/inorganic)
Social Sciences	3 years: history and government	9 cr. social sciences	9 cr. social sciences
Humanities		9 cr. humanities/fine arts	9 cr. humanities/fine arts
		Supporting Arts/Sciences 4 cr. human anatomy/physiology 4 cr. microbiology	**Supporting Arts/Sciences** 4 cr. human anatomy/physiology or general bio 4 cr. microbiology
		4-8 cr. chemistry (general/inorganic)	4-8 cr. chemistry (general/inorganic)
Nursing Coursework	2 years: Health Occupations I and II Service internship/apprenticeship CNA coursework= minimum of 3 cr. nursing transfer credit		*41-65 cr. nursing coursework* (Current range in Illinois) including clinical practicum

[1] Community college and university courses fulfill requirements for the transferable General Education Core Curriculum

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Table 1-E
CURRICULUM ARTICULATION IN NURSING (option 2)

	Secondary or Postsecondary Education	Postsecondary Education		
	Certified Nursing Assistant *15 H.S. units required for college admission*	**Licensed Practical Nurse**	***Licensed Registered Nurse*** **ADN or Diploma**	***Licensed Registered Nurse*** **BSN**
General Education				
Communication	4 years: reading/writing, speaking/ listening and literature	3 cr. composition	6 cr. communication (including 3 cr. in composition)	6 cr. composition 3 cr. speech
Math	3 years: algebra I, geometry, algebra II			3 - 6 cr. math (statistics/computer)
Science	3 years: biology, chemistry, & physics			4 cr. biology (general) 4 cr. chemistry (general/inorganic)
Social Sciences	3 years: history and government	3 cr. social sciences	6 cr. social sciences	9 cr. social sciences
Humanities				9 cr. humanities/fine arts
Supporting Arts/Sciences		4 cr. human anatomy/physiology	4 cr. human anatomy/physiology 4 cr. microbiology	4 cr. human anatomy/physiology or gen bio 4 cr. microbiology 4 - 8 cr. chemistry (general/inorganic)
Nursing Preparation	2 years: Health Occupations I and II Service internship/apprenticeship CNA coursework constitutes a minimum of 3 cr. nursing transfer	*20 - 42 cr. nursing coursework* (Current Illinois range) Clinical coursework/practicum PN coursework constitutes a minimum of 15 cr. nursing transfer	*32 - 72 cr. nursing coursework* (Current Illinois range) Clinical coursework/practicum ADN/Diploma constitutes a minimum of 30 cr. nursing transfer	*41 - 65 cr. nursing coursework* (Current range in Illinois) Clinical Practicum

NOTES:
1. Community college and university general education courses are described in the transferable General Education Core Curriculum.
2. Nursing transfer credit is not additive.

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APPENDIX F

SUMMARY OF NLN-ACCREDITED PROGRAMS

STATUS OF ADN NURSING PROGRAM ACCREDITATION IN ILLINOIS COMMUNITY COLLEGES AS REPORTED BY THE NATIONAL LEAGUE OF NURSING
February 1996

College Name	Accredited	Accreditation in Process	Accreditation Pending	Not Accredited
Belleville Area College	*			
Black Hawk College	*			
Richard J. Daley College		*		
Kennedy-King College	*			
Malcolm X College			*	
Olive-Harvey College			*	
Harry S Truman College		*		
Harold Washington College				
Wilbur Wright College				
Danville Area Community College				
College of DuPage	*			
Elgin Community College	*			
William Rainey Harper College	*			
Heartland Community College				*
Highland Community College				*
Illinois Central College	*			
Frontier Community College				
Lincoln Trail College				
Olney Central College	*			
Wabash Valley College				
Illinois Valley Community College	*			
Joliet Junior College	*			
Kankakee Community College				*
Kaskaskia College	*			
Kishwaukee College				*
College of Lake County	*			

STATUS OF ADN NURSING PROGRAM ACCREDITATION IN ILLINOIS COMMUNITY COLLEGES AS REPORTED BY THE NATIONAL LEAGUE OF NURSING
February 1996

College Name	Accredited	Accreditation in Process	Accreditation Pending	Not Accredited
Lake Land College	*			
Lewis & Clark Community College	*			
Lincoln Land Community College	*			
John A. Logan College		*		
McHenry County College				
Moraine Valley Community College	*			
Morton College				*
Oakton Community College	*			
Parkland College	*			
Prairie State College	*			
Rend Lake College				*
Richland Community College		*		
Rock Valley College				*
Carl Sandburg College				*
Sauk Valley Community College				*
Shawnee Community College		*		
South Suburban College	*			
Southeastern Illinois College		*		
Spoon River College				*
State Community College				*
Triton College	*			
Waubonsee Community College				*
John Wood Community College				*

Shading denotes colleges which are not currently offering ADN curricula.